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Via Federal Express

Ms. Kathryn J. Olson
Chair
Illinois Health Facilities and Services Review Board
525 West Jefferson Street, 2nd Floor
Springfield, Illinois 62761

Re: DaVita North Dunes Dialysis (Proj. No. 17-066)

Dear Ms. Olson:

We represent the applicants for the above-referenced project, DaVita Inc. and its subsidiary, Total Renal Care, Inc. (collectively, "DaVita") and this letter is written on their behalf. Its purpose is to further demonstrate the need for the DaVita North Dunes Dialysis project which will be located in Waukegan, Illinois. We are providing additional information regarding the City of Waukegan and the associated demographic and health care trends in that community. As discussed in greater detail, the dialysis use rate in Waukegan has increased substantially since it was last measured. As Waukegan is an economically disadvantaged community with a high concentration of population subgroups with a higher incidence of kidney failure it is likely that these demographics are driving the increase in use rate. Due to shortages in supply of health care providers, the proposed clinic is located in a federally designated Health Resources & Service Administration health professional service area and the area is also designated as a medically underserved area. The North Dunes Dialysis clinic will expand access to much needed hemodialysis services in Waukegan, Illinois.

Residents of Waukegan suffer from health inequities. Health inequities are differences in population health status and health conditions that are systemic, patterned, and actionable. These

differences arise from social and economic inequalities, including socio-economic status, race/ethnicity, age and sex/gender.[1]

- Socioeconomic indicators such as education attainment, income and race/ethnicity that drive health inequities are present in Waukegan
- Dialysis use rates continue to increase in the planning area, resulting in a need for 33 stations in Lake County by 2020, the year this facility will open
- Area providers, particularly those in Waukegan, are highly utilized and are projected to operate at or above 80% by the end of 2020 when the proposed North Dunes Dialysis clinic is anticipated to open.

I. Waukegan Demographic Data

As a general matter studies have found socioeconomic status greatly affects a person's health status. This issue has specifically been addressed in the 2016-2021 Live Well Lake County Community Health Assessment ("Lake County Health Assessment"),[2] which found a correlation between educational attainment and household income and overall rates of hypertension, obesity and diabetes. As the Illinois Health Facilities and Services Review Board ("State Board") knows, all three of these conditions are significant risk factors in developing kidney disease. The Lake County Health Assessment found individuals with bachelor's and advanced degrees are affected by hypertension at lower rates than those with a high school education or less as their highest level of education. Those with less than a bachelor's degree were nearly 50% more likely to be obese, and those with a high school degree or less were about 40% more likely than those with a bachelor's degree to be diagnosed with diabetes. The correlation between education and health status may be due to higher income associated with higher education attainment which obviously improves access to health care resources. As noted in the North Dunes CON application, individuals who lack access to health care due to income and/or insurance status are frequently not diagnosed with kidney disease until the later stages when it is often too late to stop or slow the disease progression. See Application p75.

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[1] Live Well Lake County Steering Committee, Lake County Health Department, Live Well Lake County Community Health Assessment: 2016 – 2021 10 (Aug. 24, 2016) *available at* http://www.lakecountyil.gov/DocumentCenter/View/14515 (last visited Feb. 26, 2018).

[2] The Lake County Health Department and Community Health Center with guidance from the Live Well Lake County Steering Committee conducted the community health improvement assessment from early 2015 to spring 2016. The Community Health Assessment is not a singular activity, but a developmental process that is added to and amended over time. It is not an end in itself, but a way of using information to plan public health programs in the future. The ultimate goal of a Community Health Assessment is to develop strategies to address the community's health needs and identified issues, providing the foundation for improving and promoting the health of our community.

As shown in Table 1, the percentage of Lake County residents with a bachelor's degree or higher is over twice that of Waukegan residents. Conversely, in Waukegan those residents who lack education (measured as a high school education or less) is nearly double the rate of residents with a low level of education in Lake County as a whole.

Table 1
Education Attainment

	Waukegan	%	Lake County	%	State	%
Less than 9th Grade	8,467	16.0%	24,109	5.3%	454,757	5.3%
9th to 12th Grade, no diploma	6,323	12.0%	22,056	4.9%	553,851	6.4%
High School Graduate (includes equivalency)	15,929	30.1%	94,844	21.0%	2,287,126	26.5%
Some College, no degree	9,431	17.8%	85,420	18.9%	1,815,860	21.1%
Associate's Degree	2,947	5.6%	26,530	5.9%	671,821	7.8%
Bachelor's Degree	6,665	12.6%	117,263	26.0%	1,744,260	20.2%
Graduate or Professional Degree	3,093	5.9%	80,605	17.9%	1,090,609	12.7%
Population 25 Years and Older	**52,855**	**100.0%**	**450,827**	**100.0%**	**8,618,284**	**100.0%**

United States Census Bureau, American Fact Finder, Educational Attainment: 2012 – 2016 American Community Survey 5-Year Estimate *available at* https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml# (last visited Feb. 23, 2018).

As noted above, income is an important factor in analyzing health disparities. Income represents resources that can support health and wellbeing. The higher the income level, the more likely an individual will be able to timely access a physician. The statistics from the Lake County Health Assessment bear this out. Individuals making less than $50,000 per year were about 50% more likely than individuals in higher income brackets to experience hypertension. While the survey did not find a statistically significant difference in the rates of obesity among various income brackets, those individuals making less than $50,000 were over twice as likely to be diagnosed with diabetes than those making more than $50,000.

Lake County is a large and diverse county with a population of over 700,000 people, and it has one of the highest incomes per capita in Illinois. In stark contrast and despite its location in Lake County, however, this positive economic indicator is not present in the City of Waukegan. To the contrary, Waukegan is an economically disadvantaged community which has suffered many losses in manufacturing and other industry over the last fifty years. In Waukegan which has nearly 90,000 residents, 20% of residents live below the Federal Poverty Level ("FPL"). This figure is more than double the poverty level of Lake County and is 40% higher than the FPL of residents statewide which is 14%.

Further, 150% FPL is a key factor in determining a community's low income population, as many government assistance programs, like the Illinois Medicaid program, provide aid to persons with incomes slightly above the FPL. Using 150% of the FPL as the poverty threshold,

the percentage of Waukegan residents living in poverty is over twice the percentage for Lake County as a whole and 1.5 times greater than the State.

Table 2
Poverty Status

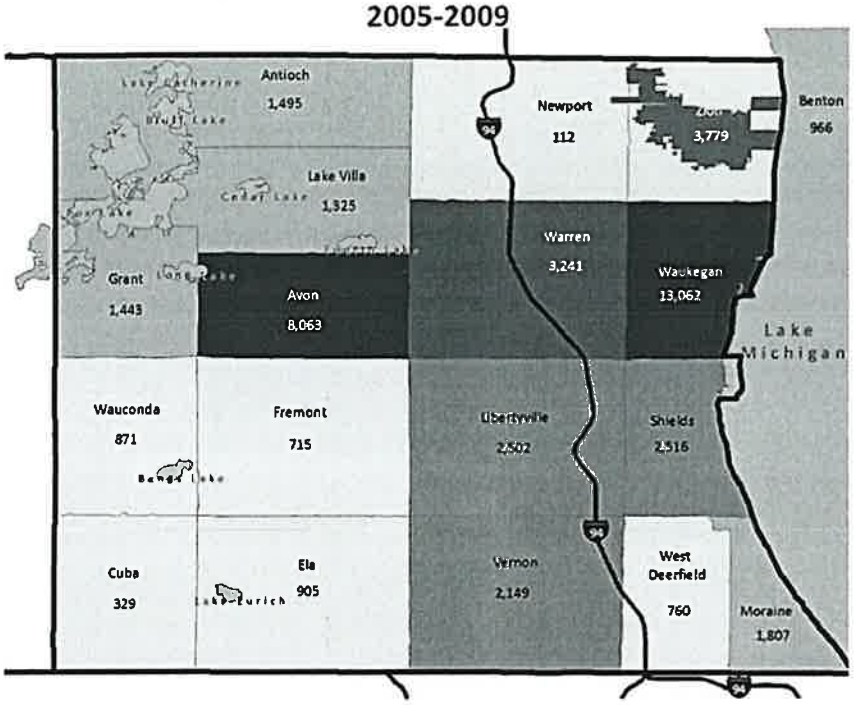
	Waukegan	%	Lake County	%	State	%
Below FPL	17,218	20.0%	60,664	8.9%	1,753,731	14.0%
50% FPL	7,307	8.5%	26,714	3.9%	801,989	6.4%
125% FPL	22,980	26.6%	83,042	12.1%	2,283,321	18.2%
150 %FPL	29,637	34.4%	108,210	15.8%	2,827,366	22.5%

United States Census Bureau, American Fact Finder, Poverty Status in the Past 12 Months: 2012 – 2016 American Community Survey 5-Year Estimate *available at* https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml# (last visited Feb. 23, 2018).

While many communities have recovered from the Great Recession of 2008, indicia of wealth trend negatively in Waukegan. As shown on the map on the following page, Waukegan has the highest number of persons in poverty in Lake County.[3] Importantly, despite the economic recovery, the number and percentage of persons living below the FPL increased nearly 50% from 13,062 persons (or 14.1%) in 2009 to 17,218 residents (or 20%) in 2016. The income disparity between Waukegan and the rest of Lake County creates systematic health inequities, which results in poorer health status and health conditions in Waukegan relative to Lake County.

[3] Rob Paral and Associates, Poverty in Lake County 5 (2012) available at http://gorterfamilyfoundation.org/wp-content/uploads/RPA-report-on-poverty-04-27-12.pdf (last visited Feb. 26, 2018)

Poverty Population by Township: Lake County, 2005-2009



Rob Paral and Associates, Poverty in Lake County 5 (2012) available at http://gorterfamilyfoundation.org/wp-content/uploads/RPA-report-on-poverty-04-27-12.pdf (last visited Feb. 26, 2018)

As stated in the North Dunes CON permit application, incidence and prevalence rates for chronic kidney disease ("CKD") and end-stage renal disease ("ESRD") are higher within certain subpopulations, which are present in Waukegan as detailed below. The ESRD incident rate among the Hispanic population is 1.5 times greater than the non-Hispanic population, and the ESRD incidence rate among African-Americans is 3.7 times greater than Caucasians. Likely contributing factors to this burden of disease include diabetes and metabolic syndrome, both are common among Hispanic and African-American individuals. Other factors for these groups that contribute to a higher disease burden are family history, impaired glucose tolerance, diabetes during pregnancy, hyperinsulinemia and insulin resistance, obesity and physical inactivity. African Americans with diabetes are more likely to develop complications of diabetes and to have greater disability from these complications than the general population. Access to health

care, the quality of care received, and barriers due to language and health literacy also play a role in the higher incident rates.[4]

According to the U.S. Census Bureau 2016 population projections, the majority (55.5%) of Waukegan residents are Hispanic. Compare this Waukegan figure to Lake County as a whole which is 20.9% Hispanic and in the State of Illinois where 16.6% of the population is Hispanic. Thus, the percentage of Hispanics is over 2.5 times higher than Lake County and nearly 3.5 higher than the State. Similarly, the percentage of African-Americans is nearly 2.5 times higher than the County as a whole. As discussed more fully below, the dialysis use rates in this community are higher than the whole of HSA 8. Accordingly, there is a need for more dialysis stations in Waukegan.

Table 3
Race/Ethnic Background

	Waukegan	%	Lake County	%	State	%
White	18,431	20.9%	445,468	63.4%	7,996,856	62.2%
African-American	13,903	15.8%	46,668	6.6%	1,810,559	14.1%
Hispanic	48,966	55.5%	146,608	20.9%	2,136,474	16.6%
American Indian	51	0.1%	637	0.1%	14,378	0.1%
Asian	4,527	5.1%	48,172	6.9%	650,929	5.1%
Native Hawaiian	19	0.0%	310	0.0%	2,994	0.0%
Other	2,262	2.6%	15,027	2.1%	239,494	1.9%
Total	**88,159**	**100.0%**	**702,890**	**100.0%**	**12,851,684**	**100.0%**

United States Census Bureau, American Fact Finder, ACS Demographic and Housing Estimates: 2012 – 2016 American Community Survey 5-Year Estimate *available at* https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml# (last visited Feb. 23, 2018).

II. Increased Dialysis Use Rate and Adjusted Projected Need

A. Historical Utilization

Historical utilization is a good predicator of future growth. Based on an increase in utilization of existing facilities in the area of the proposed project, there will be a need for at least 13 additional dialysis stations in the area to be served by the proposed facility in the year the North Dunes Dialysis clinic opens (2020). Currently, there are five approved or operational facilities within thirty minutes of the proposed North Dunes Dialysis. From December 31, 2015

[4] Claudia M. Lora, M.D. et al, *Chronic Kidney Disease in United States Hispanics: A Growing Public Health Problem,* Ethnicity Dis. 19(4), 466-72 (2009) *available at* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3587111/ (last visited Sep. 29, 2017).

to December 31, 2017, the census at those area dialysis facilities increased by 45 patients (or compound annual growth rate of 5.7%). Assuming this trend continues, utilization of the area facilities at the end of the year when the North Dunes Dialysis facility opens will be at or above the State Board's standard. See Table 4. Importantly, for all facilities to operate at target utilization of 80%, 106 stations (or 13 additional stations) will be required to treat current and future dialysis patients. This proposed project is for a 12 station dialysis facility. This increase in use rate in the area immediately surrounding the proposed facility is highly relevant to justify this project, but it is also worth noting that the need for additional stations is not unique to only Waukegan in Lake County. As discussed below, there is a need for 33 stations in Lake County as a whole in 2020 based on the updated use rate.

Table 4
Projected Utilization of Existing Facilities

Facility	Ownership	Number of Stations 12/31/17	Number of Patients 12/31/17	Utilization % 12/31/17
FMC Zion[5]	Fresenius	12	0	0.0%
DaVita Waukegan Renal Center	DaVita	24	145	100.7%
Fresenius Medical Care Waukegan Harbor	Fresenius	21	115	93.7%
Fresenius Medical Care Gurnee	Fresenius	24	97	68.1%
Fresenius Medical Care of Lake Bluff	Fresenius	16	75	**76.0%**
Total		**97**	**432**	**74.2%**

Illinois Health Facilities and Services Review Board, December 2017 ESRD Utilization

As depicted on Table 4, the one facility that DaVita currently operates in Waukegan (and the only one it operates within thirty minutes of the proposed site), DaVita Waukegan Renal Center, is fully utilized. Based on the necessity for additional slots for patients, it began, despite a desire to only operate three shifts, operating a fourth late shift at the beginning of 2018. Therefore, it cannot accommodate additional patients. The operation of a fourth shift results in the last shift of patients receiving treatment past midnight. This is suboptimal particularly considering that dialysis patients are suffering from a chronic illness and are often frail and elderly. Similarly, Fresenius Medical Care Waukegan Harbor is approaching 100% utilization. Accordingly, additional stations are necessary to accommodate current and future need for dialysis in Waukegan.

[5] Fresenius Medical Care attested in its application that Fresenius Medical Care Zion, which relied on Dr. Omaima Degani's CKD patients will be operating at or above 80% by the end of its second year of operation (2020).

B. Increased Dialysis Use Rate

In September 2017, the State Board released its 2020 station need calculations and determined there was a need for 801 dialysis stations in HSA 8. The dialysis services use rate[6] is a key data point for the need calculation. The September 2017 need calculation was based upon 2015 population projections and use rates. Importantly, in the intervening two years, the patient census in HSA 8 increased by 169 patients (or 11.0%). Updating the need calculation to account for the 2017 use rate, there is a need for 70 stations in HSA 8. Further, the North Dunes 30 minute geographic service area is encompassed entirely within Lake County. Analyzing the use rate and existing facilities within Lake County, there a need for 33 additional stations in Lake County by 2020, when North Dunes Dialysis is projected to come online.

Table 5
Need Calculation Based on 2017 Use Rate

	HSA 8	Lake County
Lake County Population – 2015	1,540,100	732,633
In Station ESRD Patients - 2017	1,710	801
Lake County Use Rate 2017	1.11	1.09
Planning Area Population - 2020 (Est)	1,692,900	764,397
Projected Patients – 2020	1,880	836
Adjustment	1.33	1.33
Patients Adjusted	2,500	1,112
Projected Treatments – 2020	389,991	173,397
Existing Stations	451	199
Stations Needed – 2020	521	232
Number of Stations Needed	**70**	**33**

Thank you for your consideration of the additional information regarding the North Dunes Dialysis project. If you have any questions or need any additional information, please feel free to contact me.

Sincerely,

Anne M. Cooper

Attachments

Cc: Gaurav Bhattacharyya

[6] Use rate is the ratio of ESRD patients per 1,000 population over a 12-month period (Inpatient Days/Population in Thousands = Use Rate). See 77 Ill. Admin. Code 1100.220.

U.S. Census Bureau

AMERICAN FactFinder

S1501 | EDUCATIONAL ATTAINMENT

2012-2016 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Tell us what you think. Provide feedback to help make American Community Survey data more useful for you.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Subject	Waukegan city, Illinois				
	Total		Percent		Males
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Population 18 to 24 years	10,721	+/-741	(X)	(X)	5,257
Less than high school graduate	2,331	+/-399	21.7%	+/-3.6	1,172
High school graduate (includes equivalency)	3,283	+/-512	30.6%	+/-4.0	1,527
Some college or associate's degree	4,539	+/-546	42.3%	+/-4.0	2,373
Bachelor's degree or higher	568	+/-194	5.3%	+/-1.8	185
Population 25 years and over	52,855	+/-793	(X)	(X)	26,432
Less than 9th grade	8,467	+/-773	16.0%	+/-1.5	4,270
9th to 12th grade, no diploma	6,323	+/-619	12.0%	+/-1.1	3,043
High school graduate (includes equivalency)	15,929	+/-940	30.1%	+/-1.6	8,512
Some college, no degree	9,431	+/-649	17.8%	+/-1.2	4,761
Associate's degree	2,947	+/-403	5.6%	+/-0.8	1,337
Bachelor's degree	6,665	+/-554	12.6%	+/-1.0	2,993
Graduate or professional degree	3,093	+/-362	5.9%	+/-0.7	1,516
Percent high school graduate or higher	(X)	(X)	72.0%	+/-1.7	(X)
Percent bachelor's degree or higher	(X)	(X)	18.5%	+/-1.3	(X)
Population 25 to 34 years	13,637	+/-618	(X)	(X)	7,405
High school graduate or higher	10,184	+/-565	74.7%	+/-2.9	5,469
Bachelor's degree or higher	2,368	+/-351	17.4%	+/-2.4	1,109
Population 35 to 44 years	11,699	+/-609	(X)	(X)	5,643
High school graduate or higher	7,937	+/-558	67.8%	+/-3.7	3,756
Bachelor's degree or higher	1,848	+/-284	15.8%	+/-2.4	726
Population 45 to 64 years	19,905	+/-779	(X)	(X)	10,068
High school graduate or higher	14,847	+/-750	74.6%	+/-2.6	7,551
Bachelor's degree or higher	4,147	+/-508	20.8%	+/-2.4	1,934
Population 65 years and over	7,614	+/-409	(X)	(X)	3,316
High school graduate or higher	5,097	+/-367	66.9%	+/-3.4	2,343

Subject	Waukegan city, Illinois				
	Total		Percent		Males
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Bachelor's degree or higher	1,395	+/-232	18.3%	+/-3.0	740
RACE AND HISPANIC OR LATINO ORIGIN BY EDUCATIONAL ATTAINMENT					
White alone	34,465	+/-1,018	(X)	(X)	17,469
High school graduate or higher	23,614	+/-902	68.5%	+/-2.1	12,180
Bachelor's degree or higher	5,575	+/-574	16.2%	+/-1.7	2,643
White alone, not Hispanic or Latino	14,383	+/-769	(X)	(X)	7,208
High school graduate or higher	13,205	+/-745	91.8%	+/-1.9	6,616
Bachelor's degree or higher	4,320	+/-495	30.0%	+/-3.1	2,108
Black alone	8,855	+/-668	(X)	(X)	4,155
High school graduate or higher	7,584	+/-636	85.6%	+/-2.2	3,487
Bachelor's degree or higher	1,829	+/-355	20.7%	+/-3.7	728
American Indian or Alaska Native alone	149	+/-90	(X)	(X)	49
High school graduate or higher	69	+/-53	46.3%	+/-26.8	19
Bachelor's degree or higher	0	+/-26	0.0%	+/-16.8	0
Asian alone	3,356	+/-414	(X)	(X)	1,639
High school graduate or higher	2,996	+/-401	89.3%	+/-5.5	1,457
Bachelor's degree or higher	1,826	+/-310	54.4%	+/-7.8	925
Native Hawaiian and Other Pacific Islander alone	19	+/-40	(X)	(X)	0
High school graduate or higher	19	+/-40	100.0%	+/-62.6	0
Bachelor's degree or higher	19	+/-40	100.0%	+/-62.6	0
Some other race alone	4,853	+/-765	(X)	(X)	2,609
High school graduate or higher	2,793	+/-539	57.6%	+/-6.0	1,562
Bachelor's degree or higher	345	+/-164	7.1%	+/-2.8	160
Two or more races	1,158	+/-277	(X)	(X)	511
High school graduate or higher	990	+/-258	85.5%	+/-6.3	414
Bachelor's degree or higher	164	+/-76	14.2%	+/-6.3	53
Hispanic or Latino Origin	25,621	+/-782	(X)	(X)	13,207
High school graduate or higher	13,675	+/-835	53.4%	+/-2.7	7,354
Bachelor's degree or higher	1,630	+/-276	6.4%	+/-1.1	674
POVERTY RATE FOR THE POPULATION 25 YEARS AND OVER FOR WHOM POVERTY STATUS IS DETERMINED BY EDUCATIONAL ATTAINMENT					
Less than high school graduate	(X)	(X)	22.0%	+/-2.4	(X)
High school graduate (includes equivalency)	(X)	(X)	17.0%	+/-2.2	(X)
Some college or associate's degree	(X)	(X)	13.7%	+/-2.5	(X)
Bachelor's degree or higher	(X)	(X)	4.6%	+/-1.4	(X)
MEDIAN EARNINGS IN THE PAST 12 MONTHS (IN 2016 INFLATION-ADJUSTED DOLLARS)					
Population 25 years and over with earnings	26,878	+/-773	(X)	(X)	30,191
Less than high school graduate	20,555	+/-1,042	(X)	(X)	24,066
High school graduate (includes equivalency)	24,166	+/-2,460	(X)	(X)	28,188
Some college or associate's degree	31,671	+/-1,334	(X)	(X)	33,039
Bachelor's degree	47,216	+/-3,814	(X)	(X)	52,616
Graduate or professional degree	75,138	+/-8,052	(X)	(X)	81,050

Subject	Waukegan city, Illinois				
	Males	Percent Males		Females	
	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Population 18 to 24 years	+/-468	(X)	(X)	5,464	+/-585
Less than high school graduate	+/-240	22.3%	+/-4.7	1,169	+/-303
High school graduate (includes equivalency)	+/-306	29.0%	+/-5.1	1,756	+/-362
Some college or associate's degree	+/-388	45.1%	+/-5.5	2,166	+/-350
Bachelor's degree or higher	+/-110	3.5%	+/-2.1	383	+/-148
Population 25 years and over	+/-644	(X)	(X)	26,423	+/-548
Less than 9th grade	+/-497	16.2%	+/-1.9	4,197	+/-398
9th to 12th grade, no diploma	+/-432	11.5%	+/-1.6	3,280	+/-404
High school graduate (includes equivalency)	+/-626	32.2%	+/-2.1	7,417	+/-526
Some college, no degree	+/-432	18.0%	+/-1.7	4,670	+/-452
Associate's degree	+/-247	5.1%	+/-0.9	1,610	+/-327
Bachelor's degree	+/-320	11.3%	+/-1.2	3,672	+/-400
Graduate or professional degree	+/-241	5.7%	+/-0.9	1,577	+/-224
Percent high school graduate or higher	(X)	72.3%	+/-2.1	(X)	(X)
Percent bachelor's degree or higher	(X)	17.1%	+/-1.5	(X)	(X)
Population 25 to 34 years	+/-444	(X)	(X)	6,232	+/-418
High school graduate or higher	+/-434	73.9%	+/-4.1	4,715	+/-397
Bachelor's degree or higher	+/-188	15.0%	+/-2.4	1,259	+/-249
Population 35 to 44 years	+/-383	(X)	(X)	6,056	+/-374
High school graduate or higher	+/-374	66.6%	+/-5.4	4,181	+/-313
Bachelor's degree or higher	+/-150	12.9%	+/-2.6	1,122	+/-224
Population 45 to 64 years	+/-504	(X)	(X)	9,837	+/-474
High school graduate or higher	+/-521	75.0%	+/-3.2	7,296	+/-429
Bachelor's degree or higher	+/-301	19.2%	+/-2.7	2,213	+/-308
Population 65 years and over	+/-258	(X)	(X)	4,298	+/-327
High school graduate or higher	+/-238	70.7%	+/-5.4	2,754	+/-287
Bachelor's degree or higher	+/-166	22.3%	+/-5.0	655	+/-145
RACE AND HISPANIC OR LATINO ORIGIN BY EDUCATIONAL ATTAINMENT					
White alone	+/-636	(X)	(X)	16,996	+/-622
High school graduate or higher	+/-557	69.7%	+/-2.7	11,434	+/-554
Bachelor's degree or higher	+/-339	15.1%	+/-2.0	2,932	+/-370
White alone, not Hispanic or Latino	+/-473	(X)	(X)	7,175	+/-473
High school graduate or higher	+/-444	91.8%	+/-3.1	6,589	+/-471
Bachelor's degree or higher	+/-319	29.2%	+/-4.2	2,212	+/-277
Black alone	+/-404	(X)	(X)	4,700	+/-381
High school graduate or higher	+/-378	83.9%	+/-3.2	4,097	+/-385
Bachelor's degree or higher	+/-190	17.5%	+/-4.3	1,101	+/-284
American Indian or Alaska Native alone	+/-44	(X)	(X)	100	+/-72
High school graduate or higher	+/-22	38.8%	+/-30.7	50	+/-50
Bachelor's degree or higher	+/-26	0.0%	+/-39.0	0	+/-26
Asian alone	+/-229	(X)	(X)	1,717	+/-239
High school graduate or higher	+/-237	88.9%	+/-6.6	1,539	+/-230
Bachelor's degree or higher	+/-175	56.4%	+/-8.6	901	+/-206
Native Hawaiian and Other Pacific Islander alone	+/-26	(X)	(X)	19	+/-40
High school graduate or higher	+/-26	-	**	19	+/-40
Bachelor's degree or higher	+/-26	-	**	19	+/-40

Subject	Waukegan city, Illinois				
	Males	Percent Males		Females	
	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Some other race alone	+/-451	(X)	(X)	2,244	+/-375
High school graduate or higher	+/-339	59.9%	+/-7.8	1,231	+/-255
Bachelor's degree or higher	+/-105	6.1%	+/-3.5	185	+/-103
Two or more races	+/-170	(X)	(X)	647	+/-172
High school graduate or higher	+/-159	81.0%	+/-9.9	576	+/-170
Bachelor's degree or higher	+/-38	10.4%	+/-7.2	111	+/-62
Hispanic or Latino Origin	+/-509	(X)	(X)	12,414	+/-437
High school graduate or higher	+/-541	55.7%	+/-3.3	6,321	+/-453
Bachelor's degree or higher	+/-172	5.1%	+/-1.3	956	+/-194
POVERTY RATE FOR THE POPULATION 25 YEARS AND OVER FOR WHOM POVERTY STATUS IS DETERMINED BY EDUCATIONAL ATTAINMENT					
Less than high school graduate	(X)	17.8%	+/-3.3	(X)	(X)
High school graduate (includes equivalency)	(X)	16.0%	+/-3.1	(X)	(X)
Some college or associate's degree	(X)	10.1%	+/-2.9	(X)	(X)
Bachelor's degree or higher	(X)	3.5%	+/-1.5	(X)	(X)
MEDIAN EARNINGS IN THE PAST 12 MONTHS (IN 2016 INFLATION-ADJUSTED DOLLARS)					
Population 25 years and over with earnings	+/-1,322	(X)	(X)	23,153	+/-1,974
Less than high school graduate	+/-2,341	(X)	(X)	17,680	+/-1,110
High school graduate (includes equivalency)	+/-2,490	(X)	(X)	20,277	+/-1,277
Some college or associate's degree	+/-5,091	(X)	(X)	30,793	+/-1,927
Bachelor's degree	+/-6,373	(X)	(X)	41,576	+/-5,851
Graduate or professional degree	+/-16,187	(X)	(X)	62,694	+/-9,084

Subject	Waukegan city, Illinois	
	Percent Females	
	Estimate	Margin of Error
Population 18 to 24 years	(X)	(X)
Less than high school graduate	21.2%	+/-5.1
High school graduate (includes equivalency)	32.1%	+/-5.3
Some college or associate's degree	39.6%	+/-5.1
Bachelor's degree or higher	7.0%	+/-2.7
Population 25 years and over	(X)	(X)
Less than 9th grade	15.9%	+/-1.5
9th to 12th grade, no diploma	12.4%	+/-1.5
High school graduate (includes equivalency)	28.1%	+/-1.8
Some college, no degree	17.7%	+/-1.7
Associate's degree	6.1%	+/-1.2
Bachelor's degree	13.9%	+/-1.5
Graduate or professional degree	6.0%	+/-0.8
Percent high school graduate or higher	71.7%	+/-1.9
Percent bachelor's degree or higher	19.9%	+/-1.7
Population 25 to 34 years	(X)	(X)
High school graduate or higher	75.7%	+/-3.7
Bachelor's degree or higher	20.2%	+/-3.8
Population 35 to 44 years	(X)	(X)
High school graduate or higher	69.0%	+/-3.6
Bachelor's degree or higher	18.5%	+/-3.6
Population 45 to 64 years	(X)	(X)
High school graduate or higher	74.2%	+/-3.2
Bachelor's degree or higher	22.5%	+/-3.1
Population 65 years and over	(X)	(X)
High school graduate or higher	64.1%	+/-4.5
Bachelor's degree or higher	15.2%	+/-3.4
RACE AND HISPANIC OR LATINO ORIGIN BY EDUCATIONAL ATTAINMENT		
White alone	(X)	(X)
High school graduate or higher	67.3%	+/-2.4
Bachelor's degree or higher	17.3%	+/-2.2
White alone, not Hispanic or Latino	(X)	(X)
High school graduate or higher	91.8%	+/-2.2
Bachelor's degree or higher	30.8%	+/-3.8
Black alone	(X)	(X)
High school graduate or higher	87.2%	+/-3.0
Bachelor's degree or higher	23.4%	+/-5.7
American Indian or Alaska Native alone	(X)	(X)
High school graduate or higher	50.0%	+/-36.8
Bachelor's degree or higher	0.0%	+/-23.7
Asian alone	(X)	(X)
High school graduate or higher	89.6%	+/-6.8
Bachelor's degree or higher	52.5%	+/-9.5
Native Hawaiian and Other Pacific Islander alone	(X)	(X)
High school graduate or higher	100.0%	+/-62.6
Bachelor's degree or higher	100.0%	+/-62.6

Subject	Waukegan city, Illinois	
	Percent Females	
	Estimate	Margin of Error
Some other race alone	(X)	(X)
High school graduate or higher	54.9%	+/-6.2
Bachelor's degree or higher	8.2%	+/-4.1
Two or more races	(X)	(X)
High school graduate or higher	89.0%	+/-7.1
Bachelor's degree or higher	17.2%	+/-9.4
Hispanic or Latino Origin	(X)	(X)
High school graduate or higher	50.9%	+/-3.1
Bachelor's degree or higher	7.7%	+/-1.6
POVERTY RATE FOR THE POPULATION 25 YEARS AND OVER FOR WHOM POVERTY STATUS IS DETERMINED BY EDUCATIONAL ATTAINMENT		
Less than high school graduate	26.0%	+/-3.5
High school graduate (includes equivalency)	18.1%	+/-2.9
Some college or associate's degree	17.1%	+/-3.8
Bachelor's degree or higher	5.5%	+/-2.2
MEDIAN EARNINGS IN THE PAST 12 MONTHS (IN 2016 INFLATION-ADJUSTED DOLLARS)		
Population 25 years and over with earnings	(X)	(X)
Less than high school graduate	(X)	(X)
High school graduate (includes equivalency)	(X)	(X)
Some college or associate's degree	(X)	(X)
Bachelor's degree	(X)	(X)
Graduate or professional degree	(X)	(X)

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

Questions for "wage and salary" and "tips, bonuses and commissions" were asked separately for the first time during non-response follow-up via Computer Assisted Telephone Interview (CATI) and Computer Assisted Personal Interview (CAPI). Prior to 2013 these questions were asked in combination, "wages, salary, tips, bonuses and commissions."

While the 2012-2016 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variabillty is

not appropriate.

7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.

8. An '(X)' means that the estimate is not applicable or not available.

U.S. Census Bureau

AMERICAN FactFinder

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2012-2016 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Tell us what you think. Provide feedback to help make American Community Survey data more useful for you.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Subject	Lake County, Illinois				
	Total		Percent		Males
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Population 18 to 24 years	70,886	+/-105	(X)	(X)	39,107
Less than high school graduate	8,750	+/-627	12.3%	+/-0.9	4,778
High school graduate (includes equivalency)	23,741	+/-1,055	33.5%	+/-1.5	14,191
Some college or associate's degree	29,453	+/-1,091	41.5%	+/-1.5	16,124
Bachelor's degree or higher	8,942	+/-605	12.6%	+/-0.9	4,014
Population 25 years and over	452,827	+/-132	(X)	(X)	219,877
Less than 9th grade	24,109	+/-1,281	5.3%	+/-0.3	11,796
9th to 12th grade, no diploma	22,056	+/-1,181	4.9%	+/-0.3	11,432
High school graduate (includes equivalency)	94,844	+/-1,768	20.9%	+/-0.4	46,325
Some college, no degree	85,420	+/-1,937	18.9%	+/-0.4	40,266
Associate's degree	28,530	+/-1,117	6.3%	+/-0.2	12,051
Bachelor's degree	117,263	+/-1,727	25.9%	+/-0.4	56,588
Graduate or professional degree	80,605	+/-1,461	17.8%	+/-0.3	41,419
Percent high school graduate or higher	(X)	(X)	89.8%	+/-0.4	(X)
Percent bachelor's degree or higher	(X)	(X)	43.7%	+/-0.5	(X)
Population 25 to 34 years	77,552	+/-148	(X)	(X)	39,598
High school graduate or higher	68,994	+/-702	89.0%	+/-0.9	34,779
Bachelor's degree or higher	29,992	+/-971	38.7%	+/-1.3	13,479
Population 35 to 44 years	91,399	+/-84	(X)	(X)	44,844
High school graduate or higher	80,841	+/-713	88.4%	+/-0.8	39,291
Bachelor's degree or higher	43,710	+/-985	47.8%	+/-1.1	20,778
Population 45 to 64 years	198,195	+/-79	(X)	(X)	97,274
High school graduate or higher	181,592	+/-712	91.6%	+/-0.4	88,544
Bachelor's degree or higher	91,958	+/-1,322	46.4%	+/-0.7	46,071
Population 65 years and over	85,681	+/-19	(X)	(X)	38,161
High school graduate or higher	75,235	+/-624	87.8%	+/-0.7	34,035

Subject	Lake County, Illinois				
	Total		Percent		Males
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Bachelor's degree or higher	32,208	+/-865	37.6%	+/-1.0	17,679
RACE AND HISPANIC OR LATINO ORIGIN BY EDUCATIONAL ATTAINMENT					
White alone	370,811	+/-1,308	(X)	(X)	180,616
High school graduate or higher	336,274	+/-1,334	90.7%	+/-0.4	163,113
Bachelor's degree or higher	163,362	+/-1,842	44.1%	+/-0.5	81,456
White alone, not Hispanic or Latino	312,039	+/-132	(X)	(X)	150,700
High school graduate or higher	300,044	+/-673	96.2%	+/-0.2	144,580
Bachelor's degree or higher	156,630	+/-1,802	50.2%	+/-0.6	78,307
Black alone	28,316	+/-360	(X)	(X)	13,173
High school graduate or higher	25,090	+/-494	88.6%	+/-1.3	11,509
Bachelor's degree or higher	7,429	+/-667	26.2%	+/-2.4	3,232
American Indian or Alaska Native alone	756	+/-177	(X)	(X)	376
High school graduate or higher	575	+/-140	76.1%	+/-10.4	271
Bachelor's degree or higher	119	+/-79	15.7%	+/-10.4	77
Asian alone	33,102	+/-376	(X)	(X)	15,505
High school graduate or higher	31,518	+/-426	95.2%	+/-0.9	14,981
Bachelor's degree or higher	23,644	+/-645	71.4%	+/-1.9	11,785
Native Hawaiian and Other Pacific Islander alone	154	+/-104	(X)	(X)	55
High school graduate or higher	132	+/-94	85.7%	+/-22.2	55
Bachelor's degree or higher	77	+/-36	50.0%	+/-36.1	0
Some other race alone	13,823	+/-1,248	(X)	(X)	7,290
High school graduate or higher	7,814	+/-869	56.5%	+/-3.5	4,150
Bachelor's degree or higher	1,140	+/-283	8.2%	+/-1.8	489
Two or more races	5,865	+/-557	(X)	(X)	2,862
High school graduate or higher	5,259	+/-526	89.7%	+/-2.4	2,570
Bachelor's degree or higher	2,097	+/-279	35.8%	+/-4.2	968
Hispanic or Latino Origin	74,823	*****	(X)	(X)	38,415
High school graduate or higher	45,676	+/-1,149	61.0%	+/-1.5	23,554
Bachelor's degree or higher	8,358	+/-670	11.2%	+/-0.9	3,826
POVERTY RATE FOR THE POPULATION 25 YEARS AND OVER FOR WHOM POVERTY STATUS IS DETERMINED BY EDUCATIONAL ATTAINMENT					
Less than high school graduate	(X)	(X)	19.3%	+/-1.3	(X)
High school graduate (includes equivalency)	(X)	(X)	10.9%	+/-0.8	(X)
Some college or associate's degree	(X)	(X)	6.6%	+/-0.5	(X)
Bachelor's degree or higher	(X)	(X)	2.8%	+/-0.2	(X)
MEDIAN EARNINGS IN THE PAST 12 MONTHS (IN 2016 INFLATION-ADJUSTED DOLLARS)					
Population 25 years and over with earnings	45,926	+/-549	(X)	(X)	56,124
Less than high school graduate	21,664	+/-507	(X)	(X)	25,559
High school graduate (includes equivalency)	30,928	+/-551	(X)	(X)	36,484
Some college or associate's degree	39,261	+/-1,108	(X)	(X)	46,255
Bachelor's degree	64,180	+/-1,772	(X)	(X)	82,729
Graduate or professional degree	90,415	+/-2,357	(X)	(X)	113,259

Subject	Lake County, Illinois				
	Males	Percent Males		Females	
	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Population 18 to 24 years	+/-68	(X)	(X)	31,779	+/-87
Less than high school graduate	+/-432	12.2%	+/-1.1	3,972	+/-442
High school graduate (includes equivalency)	+/-737	36.3%	+/-1.9	9,550	+/-663
Some college or associate's degree	+/-725	41.2%	+/-1.8	13,329	+/-749
Bachelor's degree or higher	+/-394	10.3%	+/-1.0	4,928	+/-444
Population 25 years and over	+/-100	(X)	(X)	232,950	+/-87
Less than 9th grade	+/-806	5.4%	+/-0.4	12,313	+/-651
9th to 12th grade, no diploma	+/-758	5.2%	+/-0.3	10,624	+/-737
High school graduate (includes equivalency)	+/-1,302	21.1%	+/-0.6	48,519	+/-1,065
Some college, no degree	+/-1,224	18.3%	+/-0.6	45,154	+/-1,195
Associate's degree	+/-737	5.5%	+/-0.3	16,479	+/-891
Bachelor's degree	+/-1,216	25.7%	+/-0.6	60,675	+/-1,023
Graduate or professional degree	+/-1,080	18.8%	+/-0.5	39,186	+/-829
Percent high school graduate or higher	(X)	89.4%	+/-0.5	(X)	(X)
Percent bachelor's degree or higher	(X)	44.6%	+/-0.7	(X)	(X)
Population 25 to 34 years	+/-123	(X)	(X)	37,954	+/-75
High school graduate or higher	+/-555	87.8%	+/-1.4	34,215	+/-346
Bachelor's degree or higher	+/-579	34.0%	+/-1.5	16,513	+/-628
Population 35 to 44 years	+/-64	(X)	(X)	46,555	+/-51
High school graduate or higher	+/-473	87.6%	+/-1.1	41,550	+/-402
Bachelor's degree or higher	+/-670	46.3%	+/-1.5	22,932	+/-610
Population 45 to 64 years	+/-46	(X)	(X)	100,921	+/-64
High school graduate or higher	+/-500	91.0%	+/-0.5	93,048	+/-476
Bachelor's degree or higher	+/-834	47.4%	+/-0.9	45,887	+/-821
Population 65 years and over	+/-3	(X)	(X)	47,520	+/-19
High school graduate or higher	+/-332	89.2%	+/-0.9	41,200	+/-453
Bachelor's degree or higher	+/-472	46.3%	+/-1.2	14,529	+/-551
RACE AND HISPANIC OR LATINO ORIGIN BY EDUCATIONAL ATTAINMENT					
White alone	+/-775	(X)	(X)	190,195	+/-636
High school graduate or higher	+/-824	90.3%	+/-0.5	173,161	+/-821
Bachelor's degree or higher	+/-1,307	45.1%	+/-0.8	81,906	+/-1,144
White alone, not Hispanic or Latino	+/-77	(X)	(X)	161,339	+/-73
High school graduate or higher	+/-446	95.9%	+/-0.3	155,464	+/-439
Bachelor's degree or higher	+/-1,186	52.0%	+/-0.8	78,323	+/-1,138
Black alone	+/-226	(X)	(X)	15,143	+/-226
High school graduate or higher	+/-314	87.4%	+/-1.8	13,581	+/-292
Bachelor's degree or higher	+/-366	24.5%	+/-2.9	4,197	+/-444
American Indian or Alaska Native alone	+/-122	(X)	(X)	380	+/-106
High school graduate or higher	+/-92	72.1%	+/-14.3	304	+/-102
Bachelor's degree or higher	+/-79	20.5%	+/-18.5	42	+/-31
Asian alone	+/-237	(X)	(X)	17,597	+/-218
High school graduate or higher	+/-252	96.6%	+/-1.0	16,537	+/-287
Bachelor's degree or higher	+/-403	76.0%	+/-2.4	11,859	+/-374
Native Hawaiian and Other Pacific Islander alone	+/-89	(X)	(X)	99	+/-53
High school graduate or higher	+/-89	100.0%	+/-36.7	77	+/-36
Bachelor's degree or higher	+/-26	0.0%	+/-36.7	77	+/-36

Subject	Lake County, Illinois				
	Males	Percent Males		Females	
	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Some other race alone	+/-750	(X)	(X)	6,533	+/-594
High school graduate or higher	+/-561	56.9%	+/-4.6	3,664	+/-415
Bachelor's degree or higher	+/-161	6.7%	+/-2.1	651	+/-205
Two or more races	+/-340	(X)	(X)	3,003	+/-370
High school graduate or higher	+/-332	89.8%	+/-3.4	2,689	+/-351
Bachelor's degree or higher	+/-171	33.8%	+/-5.7	1,129	+/-196
Hispanic or Latino Origin	*****	(X)	(X)	36,408	*****
High school graduate or higher	+/-763	61.3%	+/-2.0	22,122	+/-633
Bachelor's degree or higher	+/-451	10.0%	+/-1.2	4,532	+/-437
POVERTY RATE FOR THE POPULATION 25 YEARS AND OVER FOR WHOM POVERTY STATUS IS DETERMINED BY EDUCATIONAL ATTAINMENT					
Less than high school graduate	(X)	16.6%	+/-1.6	(X)	(X)
High school graduate (includes equivalency)	(X)	10.5%	+/-1.1	(X)	(X)
Some college or associate's degree	(X)	5.0%	+/-0.6	(X)	(X)
Bachelor's degree or higher	(X)	2.4%	+/-0.3	(X)	(X)
MEDIAN EARNINGS IN THE PAST 12 MONTHS (IN 2016 INFLATION-ADJUSTED DOLLARS)					
Population 25 years and over with earnings	+/-963	(X)	(X)	36,365	+/-443
Less than high school graduate	+/-806	(X)	(X)	17,556	+/-856
High school graduate (includes equivalency)	+/-1,008	(X)	(X)	25,223	+/-982
Some college or associate's degree	+/-1,643	(X)	(X)	32,438	+/-988
Bachelor's degree	+/-2,093	(X)	(X)	47,565	+/-2,138
Graduate or professional degree	+/-2,893	(X)	(X)	67,198	+/-2,087

Subject	Lake County, Illinois	
	Percent Females	
	Estimate	Margin of Error
Population 18 to 24 years	(X)	(X)
Less than high school graduate	12.5%	+/-1.4
High school graduate (includes equivalency)	30.1%	+/-2.1
Some college or associate's degree	41.9%	+/-2.4
Bachelor's degree or higher	15.5%	+/-1.4
Population 25 years and over	(X)	(X)
Less than 9th grade	5.3%	+/-0.3
9th to 12th grade, no diploma	4.6%	+/-0.3
High school graduate (includes equivalency)	20.8%	+/-0.5
Some college, no degree	19.4%	+/-0.5
Associate's degree	7.1%	+/-0.4
Bachelor's degree	26.0%	+/-0.4
Graduate or professional degree	16.8%	+/-0.4
Percent high school graduate or higher	90.2%	+/-0.4
Percent bachelor's degree or higher	42.9%	+/-0.5
Population 25 to 34 years	(X)	(X)
High school graduate or higher	90.1%	+/-0.9
Bachelor's degree or higher	43.5%	+/-1.7
Population 35 to 44 years	(X)	(X)
High school graduate or higher	89.2%	+/-0.9
Bachelor's degree or higher	49.3%	+/-1.3
Population 45 to 64 years	(X)	(X)
High school graduate or higher	92.2%	+/-0.5
Bachelor's degree or higher	45.5%	+/-0.8
Population 65 years and over	(X)	(X)
High school graduate or higher	86.7%	+/-0.9
Bachelor's degree or higher	30.6%	+/-1.2
RACE AND HISPANIC OR LATINO ORIGIN BY EDUCATIONAL ATTAINMENT		
White alone	(X)	(X)
High school graduate or higher	91.0%	+/-0.4
Bachelor's degree or higher	43.1%	+/-0.6
White alone, not Hispanic or Latino	(X)	(X)
High school graduate or higher	96.4%	+/-0.3
Bachelor's degree or higher	48.5%	+/-0.7
Black alone	(X)	(X)
High school graduate or higher	89.7%	+/-1.5
Bachelor's degree or higher	27.7%	+/-2.9
American Indian or Alaska Native alone	(X)	(X)
High school graduate or higher	80.0%	+/-14.0
Bachelor's degree or higher	11.1%	+/-8.3
Asian alone	(X)	(X)
High school graduate or higher	94.0%	+/-1.2
Bachelor's degree or higher	67.4%	+/-2.2
Native Hawaiian and Other Pacific Islander alone	(X)	(X)
High school graduate or higher	77.8%	+/-29.0
Bachelor's degree or higher	77.8%	+/-29.0

Subject	Lake County, Illinois	
	Percent Females	
	Estimate	Margin of Error
Some other race alone	(X)	(X)
High school graduate or higher	56.1%	+/-3.9
Bachelor's degree or higher	10.0%	+/-2.8
Two or more races	(X)	(X)
High school graduate or higher	89.5%	+/-2.9
Bachelor's degree or higher	37.6%	+/-5.2
Hispanic or Latino Origin	(X)	(X)
High school graduate or higher	60.8%	+/-1.7
Bachelor's degree or higher	12.4%	+/-1.2
POVERTY RATE FOR THE POPULATION 25 YEARS AND OVER FOR WHOM POVERTY STATUS IS DETERMINED BY EDUCATIONAL ATTAINMENT		
Less than high school graduate	22.0%	+/-1.7
High school graduate (includes equivalency)	11.4%	+/-0.9
Some college or associate's degree	7.9%	+/-0.7
Bachelor's degree or higher	3.2%	+/-0.3
MEDIAN EARNINGS IN THE PAST 12 MONTHS (IN 2016 INFLATION-ADJUSTED DOLLARS)		
Population 25 years and over with earnings	(X)	(X)
Less than high school graduate	(X)	(X)
High school graduate (includes equivalency)	(X)	(X)
Some college or associate's degree	(X)	(X)
Bachelor's degree	(X)	(X)
Graduate or professional degree	(X)	(X)

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U.S. Census Bureau

AMERICAN FactFinder

S1701 | POVERTY STATUS IN THE PAST 12 MONTHS

2012-2016 American Community Survey 5-Year Estimates

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Subject	Waukegan city, Illinois				
	Total		Below poverty level		Percent below poverty level
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Population for whom poverty status is determined	86,241	+/-506	17,218	+/-1,341	20.0%
AGE					
Under 18 years	24,153	+/-673	7,186	+/-881	29.8%
Under 5 years	6,794	+/-480	2,257	+/-376	33.2%
5 to 17 years	17,359	+/-564	4,929	+/-659	28.4%
Related children of householder under 18 years	24,074	+/-658	7,124	+/-882	29.6%
18 to 64 years	54,937	+/-654	9,185	+/-733	16.7%
18 to 34 years	23,864	+/-857	4,566	+/-537	19.1%
35 to 64 years	31,073	+/-814	4,619	+/-480	14.9%
60 years and over	11,276	+/-548	1,524	+/-232	13.5%
65 years and over	7,151	+/-393	847	+/-175	11.8%
SEX					
Male	42,740	+/-722	7,938	+/-707	18.6%
Female	43,501	+/-789	9,280	+/-924	21.3%
RACE AND HISPANIC OR LATINO ORIGIN					
White alone	55,676	+/-1,743	10,548	+/-1,311	18.9%
Black or African American alone	13,816	+/-912	4,427	+/-656	32.0%
American Indian and Alaska Native alone	248	+/-164	0	+/-26	0.0%
Asian alone	4,582	+/-571	243	+/-185	5.3%
Native Hawaiian and Other Pacific Islander alone	14	+/-39	0	+/-26	0.0%
Some other race alone	8,611	+/-1,246	1,460	+/-474	17.0%
Two or more races	3,294	+/-767	540	+/-251	16.4%
Hispanic or Latino origin (of any race)	48,447	+/-1,259	10,254	+/-1,313	21.2%
White alone, not Hispanic or Latino	17,599	+/-1,103	2,185	+/-452	12.4%
EDUCATIONAL ATTAINMENT					
Population 25 years and over	51,630	+/-822	7,909	+/-588	15.3%
Less than high school graduate	14,544	+/-915	3,199	+/-400	22.0%

Subject	Waukegan city, Illinois				
	Total		Below poverty level		Percent below poverty level
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
High school graduate (includes equivalency)	15,417	+/-914	2,620	+/-336	17.0%
Some college, associate's degree	12,051	+/-739	1,650	+/-315	13.7%
Bachelor's degree or higher	9,618	+/-678	440	+/-136	4.6%
EMPLOYMENT STATUS					
Civilian labor force 16 years and over	46,170	+/-1,015	5,945	+/-590	12.9%
Employed	41,609	+/-997	4,265	+/-558	10.3%
Male	22,323	+/-729	2,062	+/-368	9.2%
Female	19,286	+/-753	2,203	+/-375	11.4%
Unemployed	4,561	+/-474	1,680	+/-269	36.8%
Male	2,386	+/-346	814	+/-226	34.1%
Female	2,175	+/-321	866	+/-204	39.8%
WORK EXPERIENCE					
Population 16 years and over	64,535	+/-657	10,631	+/-777	16.5%
Worked full-time, year-round in the past 12 months	29,089	+/-876	1,330	+/-238	4.6%
Worked part-time or part-year in the past 12 months	16,598	+/-1,008	3,807	+/-527	22.9%
Did not work	18,848	+/-994	5,494	+/-577	29.1%
ALL INDIVIDUALS WITH INCOME BELOW THE FOLLOWING POVERTY RATIOS					
50 percent of poverty level	7,307	+/-954	(X)	(X)	(X)
125 percent of poverty level	22,980	+/-1,723	(X)	(X)	(X)
150 percent of poverty level	29,637	+/-1,784	(X)	(X)	(X)
185 percent of poverty level	37,712	+/-2,031	(X)	(X)	(X)
200 percent of poverty level	40,975	+/-1,988	(X)	(X)	(X)
300 percent of poverty level	57,428	+/-1,706	(X)	(X)	(X)
400 percent of poverty level	68,499	+/-1,205	(X)	(X)	(X)
500 percent of poverty level	74,252	+/-922	(X)	(X)	(X)
UNRELATED INDIVIDUALS FOR WHOM POVERTY STATUS IS DETERMINED	14,592	+/-958	4,070	+/-544	27.9%
Male	8,148	+/-796	2,123	+/-419	26.1%
Female	6,444	+/-527	1,947	+/-315	30.2%
15 years	0	+/-26	0	+/-26	-
16 to 17 years	79	+/-77	62	+/-55	78.5%
18 to 24 years	2,027	+/-449	771	+/-294	38.0%
25 to 34 years	3,285	+/-483	681	+/-202	20.7%
35 to 44 years	2,330	+/-378	680	+/-205	29.2%
45 to 54 years	2,240	+/-336	744	+/-210	33.2%
55 to 64 years	2,383	+/-338	668	+/-198	28.0%
65 to 74 years	1,413	+/-222	343	+/-137	24.3%
75 years and over	835	+/-165	121	+/-57	14.5%
Mean income deficit for unrelated individuals (dollars)	7,229	+/-558	(X)	(X)	(X)
Worked full-time, year-round in the past 12 months	7,044	+/-758	269	+/-141	3.8%
Worked less than full-time, year-round in the past 12 months	3,074	+/-431	1,432	+/-329	46.6%
Did not work	4,474	+/-458	2,369	+/-405	53.0%

Subject	Waukegan city, Illinois Percent below poverty level Margin of Error
Population for whom poverty status is determined	+/-1.6
AGE	
Under 18 years	+/-3.5
Under 5 years	+/-5.3
5 to 17 years	+/-3.6
Related children of householder under 18 years	+/-3.5
18 to 64 years	+/-1.3
18 to 34 years	+/-2.2
35 to 64 years	+/-1.4
60 years and over	+/-2.0
65 years and over	+/-2.4
SEX	
Male	+/-1.6
Female	+/-2.0
RACE AND HISPANIC OR LATINO ORIGIN	
White alone	+/-2.3
Black or African American alone	+/-4.6
American Indian and Alaska Native alone	+/-10.5
Asian alone	+/-3.9
Native Hawaiian and Other Pacific Islander alone	+/-72.9
Some other race alone	+/-5.4
Two or more races	+/-7.4
Hispanic or Latino origin (of any race)	+/-2.6
White alone, not Hispanic or Latino	+/-2.5
EDUCATIONAL ATTAINMENT	
Population 25 years and over	+/-1.2
Less than high school graduate	+/-2.4
High school graduate (includes equivalency)	+/-2.2
Some college, associate's degree	+/-2.5
Bachelor's degree or higher	+/-1.4
EMPLOYMENT STATUS	
Civilian labor force 16 years and over	+/-1.3
Employed	+/-1.3
Male	+/-1.6
Female	+/-1.9
Unemployed	+/-4.6
Male	+/-7.6
Female	+/-7.9
WORK EXPERIENCE	
Population 16 years and over	+/-1.2
Worked full-time, year-round in the past 12 months	+/-0.8
Worked part-time or part-year in the past 12 months	+/-2.9
Did not work	+/-2.3
ALL INDIVIDUALS WITH INCOME BELOW THE FOLLOWING POVERTY RATIOS	
50 percent of poverty level	(X)
125 percent of poverty level	(X)
150 percent of poverty level	(X)
185 percent of poverty level	(X)
200 percent of poverty level	(X)

Subject	Waukegan city, Illinois
	Percent below poverty level
	Margin of Error
300 percent of poverty level	(X)
400 percent of poverty level	(X)
500 percent of poverty level	(X)
UNRELATED INDIVIDUALS FOR WHOM POVERTY STATUS IS DETERMINED	+/-3.3
Male	+/-4.2
Female	+/-4.7
15 years	**
16 to 17 years	+/-19.1
18 to 24 years	+/-12.5
25 to 34 years	+/-6.1
35 to 44 years	+/-7.0
45 to 54 years	+/-6.9
55 to 64 years	+/-6.9
65 to 74 years	+/-7.8
75 years and over	+/-6.1
Mean income deficit for unrelated individuals (dollars)	(X)
Worked full-time, year-round in the past 12 months	+/-2.0
Worked less than full-time, year-round in the past 12 months	+/-7.4
Did not work	+/-5.3

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Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

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Subject	Lake County, Illinois				
	Total		Below poverty level		Percent below poverty level
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
Population for whom poverty status is determined	685,353	+/-846	60,664	+/-2,454	8.9%
AGE					
Under 18 years	177,435	+/-374	21,584	+/-1,352	12.2%
Under 5 years	41,938	+/-159	6,100	+/-547	14.5%
5 to 17 years	135,497	+/-322	15,484	+/-1,148	11.4%
Related children of householder under 18 years	176,930	+/-411	21,208	+/-1,330	12.0%
18 to 64 years	424,852	+/-704	34,004	+/-1,396	8.0%
18 to 34 years	136,696	+/-737	14,771	+/-849	10.8%
35 to 64 years	288,156	+/-471	19,233	+/-1,031	6.7%
60 years and over	123,720	+/-1,015	7,668	+/-644	6.2%
65 years and over	83,066	+/-352	5,076	+/-496	6.1%
SEX					
Male	338,835	+/-714	28,051	+/-1,331	8.3%
Female	346,518	+/-612	32,613	+/-1,512	9.4%
RACE AND HISPANIC OR LATINO ORIGIN					
White alone	548,451	+/-2,276	42,256	+/-2,057	7.7%
Black or African American alone	45,361	+/-978	10,970	+/-1,037	24.2%
American Indian and Alaska Native alone	1,088	+/-281	20	+/-18	1.8%
Asian alone	47,919	+/-735	2,665	+/-476	5.6%
Native Hawaiian and Other Pacific Islander alone	296	+/-115	22	+/-37	7.4%
Some other race alone	24,536	+/-2,154	3,161	+/-756	12.9%
Two or more races	17,702	+/-1,250	1,570	+/-284	8.9%
Hispanic or Latino origin (of any race)	144,030	+/-448	23,783	+/-1,826	16.5%
White alone, not Hispanic or Latino	434,823	+/-773	22,642	+/-1,298	5.2%
EDUCATIONAL ATTAINMENT					
Population 25 years and over	446,415	+/-721	31,756	+/-1,403	7.1%
Less than high school graduate	45,504	+/-1,615	8,767	+/-636	19.3%

Subject	Lake County, Illinois				
	Total		Below poverty level		Percent below poverty level
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate
High school graduate (includes equivalency)	92,864	+/-1,821	10,146	+/-764	10.9%
Some college, associate's degree	111,949	+/-2,233	7,347	+/-549	6.6%
Bachelor's degree or higher	196,098	+/-2,071	5,496	+/-495	2.8%
EMPLOYMENT STATUS					
Civilian labor force 16 years and over	367,995	+/-2,100	20,249	+/-1,062	5.5%
Employed	342,299	+/-1,960	13,919	+/-908	4.1%
Male	183,324	+/-1,441	6,802	+/-653	3.7%
Female	158,975	+/-1,383	7,117	+/-559	4.5%
Unemployed	25,696	+/-1,088	6,330	+/-513	24.6%
Male	14,472	+/-755	3,487	+/-373	24.1%
Female	11,224	+/-825	2,843	+/-347	25.3%
WORK EXPERIENCE					
Population 16 years and over	529,986	+/-955	41,307	+/-1,589	7.8%
Worked full-time, year-round in the past 12 months	244,194	+/-1,944	4,455	+/-463	1.8%
Worked part-time or part-year in the past 12 months	132,541	+/-2,009	13,531	+/-774	10.2%
Did not work	153,251	+/-1,856	23,321	+/-1,179	15.2%
ALL INDIVIDUALS WITH INCOME BELOW THE FOLLOWING POVERTY RATIOS					
50 percent of poverty level	26,714	+/-1,813	(X)	(X)	(X)
125 percent of poverty level	83,042	+/-2,937	(X)	(X)	(X)
150 percent of poverty level	108,210	+/-3,378	(X)	(X)	(X)
185 percent of poverty level	141,065	+/-4,234	(X)	(X)	(X)
200 percent of poverty level	155,755	+/-4,350	(X)	(X)	(X)
300 percent of poverty level	252,077	+/-4,249	(X)	(X)	(X)
400 percent of poverty level	330,378	+/-3,870	(X)	(X)	(X)
500 percent of poverty level	402,225	+/-3,670	(X)	(X)	(X)
UNRELATED INDIVIDUALS FOR WHOM POVERTY STATUS IS DETERMINED	90,138	+/-1,756	16,863	+/-853	18.7%
Male	43,747	+/-1,314	8,238	+/-630	18.8%
Female	46,391	+/-1,071	8,625	+/-548	18.6%
15 years	153	+/-78	153	+/-78	100.0%
16 to 17 years	259	+/-102	223	+/-89	86.1%
18 to 24 years	7,345	+/-710	2,868	+/-455	39.0%
25 to 34 years	15,561	+/-1,000	2,608	+/-350	16.8%
35 to 44 years	10,591	+/-670	2,202	+/-379	20.8%
45 to 54 years	15,038	+/-745	2,726	+/-339	18.1%
55 to 64 years	16,954	+/-679	3,118	+/-334	18.4%
65 to 74 years	11,491	+/-506	1,445	+/-242	12.6%
75 years and over	12,746	+/-519	1,520	+/-224	11.9%
Mean income deficit for unrelated individuals (dollars)	7,225	+/-220	(X)	(X)	(X)
Worked full-time, year-round in the past 12 months	41,951	+/-1,358	1,097	+/-240	2.6%
Worked less than full-time, year-round in the past 12 months	18,076	+/-932	5,518	+/-590	30.5%
Did not work	30,111	+/-951	10,248	+/-667	34.0%

Subject	Lake County, Illinois Percent below poverty level Margin of Error
Population for whom poverty status is determined	+/-0.4
AGE	
Under 18 years	+/-0.8
Under 5 years	+/-1.3
5 to 17 years	+/-0.8
Related children of householder under 18 years	+/-0.8
18 to 64 years	+/-0.3
18 to 34 years	+/-0.6
35 to 64 years	+/-0.4
60 years and over	+/-0.5
65 years and over	+/-0.6
SEX	
Male	+/-0.4
Female	+/-0.4
RACE AND HISPANIC OR LATINO ORIGIN	
White alone	+/-0.4
Black or African American alone	+/-2.2
American Indian and Alaska Native alone	+/-1.7
Asian alone	+/-1.0
Native Hawaiian and Other Pacific Islander alone	+/-12.3
Some other race alone	+/-2.8
Two or more races	+/-1.5
Hispanic or Latino origin (of any race)	+/-1.3
White alone, not Hispanic or Latino	+/-0.3
EDUCATIONAL ATTAINMENT	
Population 25 years and over	+/-0.3
Less than high school graduate	+/-1.3
High school graduate (includes equivalency)	+/-0.8
Some college, associate's degree	+/-0.5
Bachelor's degree or higher	+/-0.2
EMPLOYMENT STATUS	
Civilian labor force 16 years and over	+/-0.3
Employed	+/-0.3
Male	+/-0.4
Female	+/-0.3
Unemployed	+/-1.8
Male	+/-2.5
Female	+/-2.5
WORK EXPERIENCE	
Population 16 years and over	+/-0.3
Worked full-time, year-round in the past 12 months	+/-0.2
Worked part-time or part-year in the past 12 months	+/-0.5
Did not work	+/-0.7
ALL INDIVIDUALS WITH INCOME BELOW THE FOLLOWING POVERTY RATIOS	
50 percent of poverty level	(X)
125 percent of poverty level	(X)
150 percent of poverty level	(X)
185 percent of poverty level	(X)
200 percent of poverty level	(X)

Subject	Lake County, Illinois
	Percent below poverty level
	Margin of Error
300 percent of poverty level	(X)
400 percent of poverty level	(X)
500 percent of poverty level	(X)
UNRELATED INDIVIDUALS FOR WHOM POVERTY STATUS IS DETERMINED	+/-0.9
Male	+/-1.4
Female	+/-1.1
15 years	+/-16.4
16 to 17 years	+/-14.4
18 to 24 years	+/-5.5
25 to 34 years	+/-2.0
35 to 44 years	+/-3.2
45 to 54 years	+/-2.1
55 to 64 years	+/-1.8
65 to 74 years	+/-1.9
75 years and over	+/-1.7
Mean income deficit for unrelated individuals (dollars)	(X)
Worked full-time, year-round in the past 12 months	+/-0.6
Worked less than full-time, year-round in the past 12 months	+/-2.7
Did not work	+/-1.6

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AMERICAN FactFinder

DP05

ACS DEMOGRAPHIC AND HOUSING ESTIMATES

2012-2016 American Community Survey 5-Year Estimates

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Subject	Waukegan city, Illinois			
	Estimate	Margin of Error	Percent	Percent Margin of Error
SEX AND AGE				
Total population	88,159	+/-422	88,159	(X)
Male	44,175	+/-761	50.1%	+/-0.8
Female	43,984	+/-764	49.9%	+/-0.8
Under 5 years	6,889	+/-492	7.8%	+/-0.5
5 to 9 years	7,368	+/-498	8.4%	+/-0.6
10 to 14 years	6,427	+/-470	7.3%	+/-0.5
15 to 19 years	6,774	+/-497	7.7%	+/-0.6
20 to 24 years	7,846	+/-648	8.9%	+/-0.7
25 to 34 years	13,637	+/-618	15.5%	+/-0.7
35 to 44 years	11,699	+/-609	13.3%	+/-0.7
45 to 54 years	10,864	+/-619	12.3%	+/-0.7
55 to 59 years	4,823	+/-492	5.5%	+/-0.6
60 to 64 years	4,218	+/-409	4.8%	+/-0.5
65 to 74 years	4,593	+/-323	5.2%	+/-0.4
75 to 84 years	1,985	+/-220	2.3%	+/-0.3
85 years and over	1,036	+/-258	1.2%	+/-0.3
Median age (years)	31.3	+/-0.7	(X)	(X)
18 years and over	63,576	+/-626	72.1%	+/-0.7
21 years and over	59,218	+/-710	67.2%	+/-0.8
62 years and over	9,921	+/-507	11.3%	+/-0.6
65 years and over	7,614	+/-409	8.6%	+/-0.5
18 years and over	63,576	+/-626	63,576	(X)
Male	31,689	+/-692	49.8%	+/-0.9
Female	31,887	+/-614	50.2%	+/-0.9
65 years and over	7,614	+/-409	7,614	(X)
Male	3,316	+/-258	43.6%	+/-2.7

Subject	Waukegan city, Illinois			
	Estimate	Margin of Error	Percent	Percent Margin of Error
Female	4,298	+/-327	56.4%	+/-2.7
RACE				
Total population	88,159	+/-422	88,159	(X)
One race	84,835	+/-894	96.2%	+/-0.9
Two or more races	3,324	+/-768	3.8%	+/-0.9
One race	84,835	+/-894	96.2%	+/-0.9
White	56,889	+/-1,724	64.5%	+/-1.9
Black or African American	14,321	+/-925	16.2%	+/-1.1
American Indian and Alaska Native	248	+/-164	0.3%	+/-0.2
Cherokee tribal grouping	0	+/-26	0.0%	+/-0.1
Chippewa tribal grouping	0	+/-26	0.0%	+/-0.1
Navajo tribal grouping	0	+/-26	0.0%	+/-0.1
Sioux tribal grouping	0	+/-26	0.0%	+/-0.1
Asian	4,609	+/-573	5.2%	+/-0.7
Asian Indian	1,499	+/-358	1.7%	+/-0.4
Chinese	464	+/-221	0.5%	+/-0.3
Filipino	1,901	+/-557	2.2%	+/-0.6
Japanese	22	+/-23	0.0%	+/-0.1
Korean	252	+/-198	0.3%	+/-0.2
Vietnamese	152	+/-138	0.2%	+/-0.2
Other Asian	319	+/-170	0.4%	+/-0.2
Native Hawaiian and Other Pacific Islander	19	+/-40	0.0%	+/-0.1
Native Hawaiian	19	+/-40	0.0%	+/-0.1
Guamanian or Chamorro	0	+/-26	0.0%	+/-0.1
Samoan	0	+/-26	0.0%	+/-0.1
Other Pacific Islander	0	+/-26	0.0%	+/-0.1
Some other race	8,749	+/-1,272	9.9%	+/-1.4
Two or more races	3,324	+/-768	3.8%	+/-0.9
White and Black or African American	1,277	+/-485	1.4%	+/-0.6
White and American Indian and Alaska Native	359	+/-186	0.4%	+/-0.2
White and Asian	319	+/-166	0.4%	+/-0.2
Black or African American and American Indian and Alaska Native	130	+/-82	0.1%	+/-0.1
Race alone or in combination with one or more other races				
Total population	88,159	+/-422	88,159	(X)
White	59,675	+/-1,681	67.7%	+/-1.8
Black or African American	16,219	+/-1,087	18.4%	+/-1.2
American Indian and Alaska Native	1,000	+/-283	1.1%	+/-0.3
Asian	5,361	+/-618	6.1%	+/-0.7
Native Hawaiian and Other Pacific Islander	214	+/-200	0.2%	+/-0.2
Some other race	9,461	+/-1,271	10.7%	+/-1.4
HISPANIC OR LATINO AND RACE				
Total population	88,159	+/-422	88,159	(X)
Hispanic or Latino (of any race)	48,966	+/-1,327	55.5%	+/-1.5
Mexican	40,521	+/-1,532	46.0%	+/-1.7
Puerto Rican	2,408	+/-591	2.7%	+/-0.7
Cuban	20	+/-26	0.0%	+/-0.1
Other Hispanic or Latino	6,017	+/-983	6.8%	+/-1.1
Not Hispanic or Latino	39,193	+/-1,292	44.5%	+/-1.5
White alone	18,431	+/-1,104	20.9%	+/-1.2
Black or African American alone	13,903	+/-896	15.8%	+/-1.0
American Indian and Alaska Native alone	51	+/-47	0.1%	+/-0.1
Asian alone	4,527	+/-559	5.1%	+/-0.6
Native Hawaiian and Other Pacific Islander alone	19	+/-40	0.0%	+/-0.1

Subject	Waukegan city, Illinois			
	Estimate	Margin of Error	Percent	Percent Margin of Error
Some other race alone	394	+/-295	0.4%	+/-0.3
Two or more races	1,868	+/-628	2.1%	+/-0.7
Two races including Some other race	21	+/-23	0.0%	+/-0.1
Two races excluding Some other race, and Three or more races	1,847	+/-629	2.1%	+/-0.7
Total housing units	31,914	+/-687	(X)	(X)
CITIZEN, VOTING AGE POPULATION				
Citizen, 18 and over population	44,295	+/-1,228	44,295	(X)
Male	21,804	+/-856	49.2%	+/-1.1
Female	22,491	+/-693	50.8%	+/-1.1

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

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Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
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7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

U.S. Census Bureau

AMERICAN FactFinder

DP05

ACS DEMOGRAPHIC AND HOUSING ESTIMATES

2012-2016 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Tell us what you think. Provide feedback to help make American Community Survey data more useful for you.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Subject	Lake County, Illinois			
	Estimate	Margin of Error	Percent	Percent Margin of Error
SEX AND AGE				
Total population	702,890	*****	702,890	(X)
Male	350,890	+/-48	49.9%	+/-0.1
Female	352,000	+/-48	50.1%	+/-0.1
Under 5 years	42,340	+/-74	6.0%	+/-0.1
5 to 9 years	49,474	+/-1,044	7.0%	+/-0.1
10 to 14 years	53,717	+/-1,048	7.6%	+/-0.1
15 to 19 years	56,002	+/-133	8.0%	+/-0.1
20 to 24 years	48,530	+/-81	6.9%	+/-0.1
25 to 34 years	77,552	+/-148	11.0%	+/-0.1
35 to 44 years	91,399	+/-84	13.0%	+/-0.1
45 to 54 years	107,967	+/-80	15.4%	+/-0.1
55 to 59 years	49,311	+/-923	7.0%	+/-0.1
60 to 64 years	40,917	+/-924	5.8%	+/-0.1
65 to 74 years	50,001	+/-46	7.1%	+/-0.1
75 to 84 years	24,231	+/-522	3.4%	+/-0.1
85 years and over	11,449	+/-522	1.6%	+/-0.1
Median age (years)	37.8	+/-0.2	(X)	(X)
18 years and over	523,713	+/-80	74.5%	+/-0.1
21 years and over	491,259	+/-720	69.9%	+/-0.1
62 years and over	108,222	+/-829	15.4%	+/-0.1
65 years and over	85,681	+/-19	12.2%	+/-0.1
18 years and over	523,713	+/-80	523,713	(X)
Male	258,984	+/-80	49.5%	+/-0.1
Female	264,729	+/-4	50.5%	+/-0.1
65 years and over	85,681	+/-19	85,681	(X)
Male	38,161	+/-3	44.5%	+/-0.1

Subject	Lake County, Illinois			
	Estimate	Margin of Error	Percent	Percent Margin of Error
Female	47,520	+/-19	55.5%	+/-0.1
RACE				
Total population	702,890	*****	702,890	(X)
One race	684,183	+/-1,288	97.3%	+/-0.2
Two or more races	18,707	+/-1,288	2.7%	+/-0.2
One race	684,183	+/-1,288	97.3%	+/-0.2
White	560,871	+/-2,402	79.8%	+/-0.3
Black or African American	48,091	+/-857	6.8%	+/-0.1
American Indian and Alaska Native	1,116	+/-285	0.2%	+/-0.1
Cherokee tribal grouping	142	+/-89	0.0%	+/-0.1
Chippewa tribal grouping	49	+/-35	0.0%	+/-0.1
Navajo tribal grouping	28	+/-45	0.0%	+/-0.1
Sioux tribal grouping	7	+/-9	0.0%	+/-0.1
Asian	48,690	+/-734	6.9%	+/-0.1
Asian Indian	15,446	+/-1,224	2.2%	+/-0.2
Chinese	9,053	+/-780	1.3%	+/-0.1
Filipino	10,328	+/-963	1.5%	+/-0.1
Japanese	1,495	+/-380	0.2%	+/-0.1
Korean	7,341	+/-949	1.0%	+/-0.1
Vietnamese	1,054	+/-319	0.1%	+/-0.1
Other Asian	3,973	+/-645	0.6%	+/-0.1
Native Hawaiian and Other Pacific Islander	353	+/-123	0.1%	+/-0.1
Native Hawaiian	114	+/-120	0.0%	+/-0.1
Guamanian or Chamorro	0	+/-26	0.0%	+/-0.1
Samoan	22	+/-37	0.0%	+/-0.1
Other Pacific Islander	217	+/-140	0.0%	+/-0.1
Some other race	25,062	+/-2,143	3.6%	+/-0.3
Two or more races	18,707	+/-1,288	2.7%	+/-0.2
White and Black or African American	4,934	+/-707	0.7%	+/-0.1
White and American Indian and Alaska Native	2,184	+/-246	0.3%	+/-0.1
White and Asian	5,705	+/-650	0.8%	+/-0.1
Black or African American and American Indian and Alaska Native	373	+/-172	0.1%	+/-0.1
Race alone or in combination with one or more other races				
Total population	702,890	*****	702,890	(X)
White	577,131	+/-2,320	82.1%	+/-0.3
Black or African American	54,959	+/-686	7.8%	+/-0.1
American Indian and Alaska Native	4,736	+/-434	0.7%	+/-0.1
Asian	56,581	+/-580	8.0%	+/-0.1
Native Hawaiian and Other Pacific Islander	1,288	+/-316	0.2%	+/-0.1
Some other race	28,366	+/-2,315	4.0%	+/-0.3
HISPANIC OR LATINO AND RACE				
Total population	702,890	*****	702,890	(X)
Hispanic or Latino (of any race)	146,608	*****	20.9%	*****
Mexican	119,288	+/-1,700	17.0%	+/-0.2
Puerto Rican	9,064	+/-1,128	1.3%	+/-0.2
Cuban	1,135	+/-296	0.2%	+/-0.1
Other Hispanic or Latino	17,121	+/-1,484	2.4%	+/-0.2
Not Hispanic or Latino	556,282	*****	79.1%	*****
White alone	445,468	+/-257	63.4%	+/-0.1
Black or African American alone	46,668	+/-793	6.6%	+/-0.1
American Indian and Alaska Native alone	637	+/-153	0.1%	+/-0.1
Asian alone	48,172	+/-684	6.9%	+/-0.1
Native Hawaiian and Other Pacific Islander alone	310	+/-113	0.0%	+/-0.1

Subject	Lake County, Illinois			
	Estimate	Margin of Error	Percent	Percent Margin of Error
Some other race alone	888	+/-368	0.1%	+/-0.1
Two or more races	14,139	+/-1,091	2.0%	+/-0.2
Two races including Some other race	710	+/-246	0.1%	+/-0.1
Two races excluding Some other race, and Three or more races	13,429	+/-1,053	1.9%	+/-0.1
Total housing units	261,715	+/-433	(X)	(X)
CITIZEN, VOTING AGE POPULATION				
Citizen, 18 and over population	462,021	+/-1,970	462,021	(X)
Male	227,996	+/-1,185	49.3%	+/-0.1
Female	234,025	+/-1,075	50.7%	+/-0.1

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LakeCounty Health Department and Community Health Center

Live Well Lake County

2016-2021

Live Well Lake County Community Health Assessment

Live Well Lake County Steering Committee

LAKE COUNTY HEALTH DEPARTMENT

APPROVED BY THE BOARD OF HEALTH, AUGUST 24, 2016

Attachment - 4

CONTENTS

Contents

CONTENTS

Introduction

The Lake County Health Department and Community Health Center (LCHD/CHC), with guidance from the Live Well Lake County Steering Committee, conducted the community health improvement process between early 2015 and spring 2016. The community health improvement process yields two distinct, but connected deliverables: the Community Health Assessment and the Community Health Improvement Plan.

The Community Health Assessment is not a singular activity, but a developmental process that is added to and amended over time. It is not an end in itself, but a way of using information to plan public health programs in the future. The ultimate goal of a Community Health Assessment is to develop strategies to address the community's health needs and identified issues, providing the foundation for improving and promoting the health of our community.

The Community Health Assessment uses quantitative and qualitative methods to collect and examine health status indicators and provide an understanding of health in a community. Risk factors, mortality, morbidity, forces of change, the capacity of the local public health system, quality of life, community assets, social determinants of health, and health inequities were collected to identify the community's key health issues. Ultimately, the Community Health Assessment guides the development and implementation of a Community Health Improvement Plan by justifying how and where resources should be allocated to best meet community needs.[1]

The benefits of conducting a Community Health Assessment include:

- Improved organizational and community coordination and collaboration;
- Increased knowledge about public health and the interconnectedness of activities;
- Strengthened partnerships within our local public health systems;
- Identified strengths and weaknesses to address in quality improvement efforts; and
- Benchmarks for public health practice improvements.[2]

Through this process, LCHD/CHC and the Live Well Lake County Steering Committee, engaged a diverse array of community members and broad representation from the local public health system to identify health issues affecting the residents of Lake County. These collaborations are intended to foster shared ownership for health among our stakeholders. Presented on the following pages are the results of analyses from multiple surveys, focus groups, facilitated discussions, and data sets.

For any questions on interpretation or for access to the included data, please contact the Health Department Assessment Team at HealthAssessment@lakecountyil.gov

[1] NACCHO, Definitions of Community Health Assessments (CHA) and Community Health Improvement Plans (CHIPs), 2016.
[2] CDC, Community Health Assessments & Health Improvement Plans, 2015.

INTRODUCTION

LIVE WELL LAKE COUNTY STEERING COMMITTEE MEMBERS

Ernest Vasseur, Co-chair
Healthcare Foundation of Northern Lake County

Mark Pfister, Co-chair
Lake County Health Department and Community Health Center

Jeanne Ang
Advocate Health Care

Karen Colby
Alt: Holly Manprisio
Northwestern Lake Forest Hospital
Northwestern Memorial HealthCare

Mary C. Dominiak
Antioch Area Healthcare Accessibility Alliance

David Fries
Catholic Charities

Paul Geiselhart
Audubon Society

Tiffany Gonzalez
Lake County Housing Authority

Bruce Johnson
Nicasa

Ann Maine
Alt: Nan Buckardt
Lake County Forest Preserves

Megan McKenna Mejia
Mano a Mano Family Resource Center

Maggie Morales
The Lake County Community Foundation

David Reid
Lovell Federal Healthcare Center/ NAVSTA Great Lakes

Cheri Richardson
The Alliance for Human Services

Pastor Wade Stevenson
North Shore Baptist Ministers' Alliance

Tameka Wilson
YouthBuild Lake County

Sophie Twichell
National Recreation Foundation

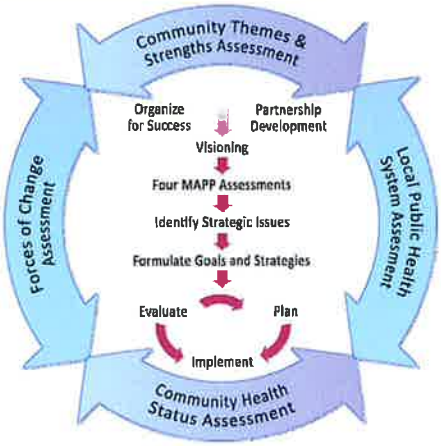
Dr. K. Michael Welch
Alt: Naomi Parrella, M.D.
Rosalind Franklin University of Medicine and Science

Roycealee J. Wood
Alt: Gary Pickens
Lake County Regional Office of Education

INTRODUCTION

MOBILIZING FOR ACTION THROUGH PLANNING AND PARTNERSHIPS (MAPP)

The Lake County community health improvement process was developed within the **M**obilizing for **A**ction through **P**lanning and **P**artnerships, or MAPP, framework.



MAPP follows seven guiding principles:

1. Systems Thinking
2. Dialogue
3. Shared Vision
4. Data
5. Partnerships and Collaboration
6. Strategic Thinking
7. Celebration of Successes

The National Association of County and City Health Officials (NACCHO) and the Centers for Disease Control and Prevention (CDC) created the MAPP framework as a strategic approach for community health improvement that creates a healthy community and better way of life, increases the visibility of public health within the community, anticipates and manages change, creates a stronger public health infrastructure, and engages the community and creates community ownership for public health issues. Since its completion in 2000, MAPP has become the leading tool that health departments and their partners use to guide public health planning processes. To begin Lake County's planning process, LCHD/CHC supported community efforts by conducting the four MAPP Assessments:

- Local Public Health System Assessment – Conducted on June 18, 2015, this assessment utilized the National Public Health Standards Program assessment of the components, activities, competencies and capacities of the local public health system and analyzed how well the Essential Public Health Services are delivered.
- Forces of Change Assessment – Conducted on October 23, 2015, the assessment identified the forces that affect or will be affecting the community and public health system, as well as the threats or opportunities that result.
- Community Themes and Strengths Assessment – Conducted from September to December of 2015, the assessment identified the community's interests, perceptions about quality of life in Lake County, and community assets.
- Community Health Status Assessment – Throughout 2015, primary and secondary data were gathered to describe the health status, quality of life, demographics, and behavioral risk factors in the community.[3],[4]

[3] http://archived.naccho.org/topics/infrastructure/mapp/framework/upload/MAPP-Brochure-2.pdf
[4] http://www.naccho.org/programs/public-health-infrastructure/mapp

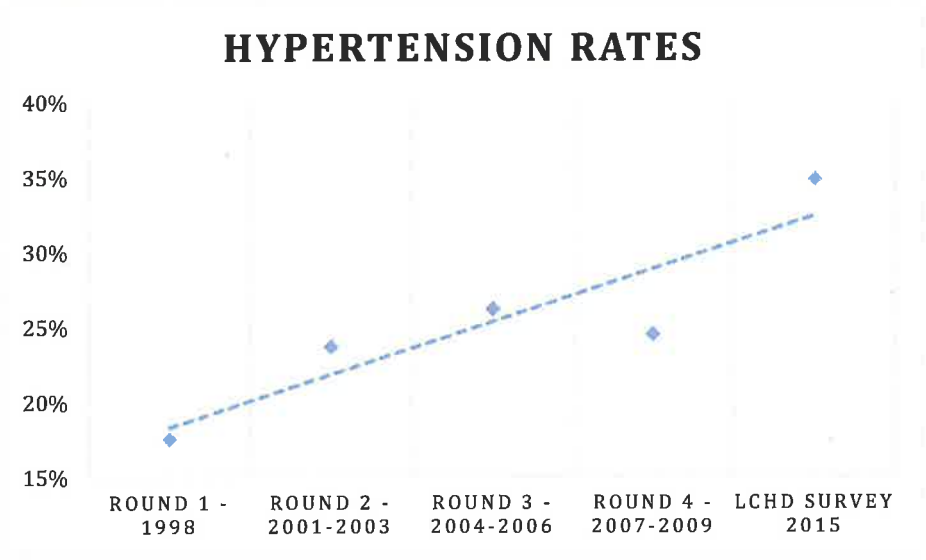
Selected Community Health Priorities

FOUR COMMUNITY HEALTH PRIORITIES

1. Cardiovascular disease and hypertension
2. Behavioral health
3. Obesity
4. Diabetes

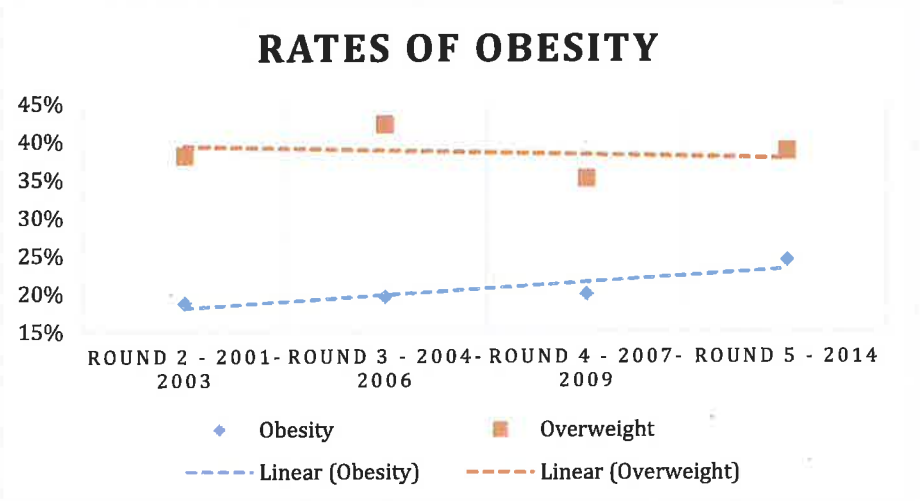
While the health improvement priorities were selected based on the most recent data available, the conditions have emerged as driving factors in resident health over longer time horizons. Lake County has experienced upward trends in the prevalence of these key chronic conditions. Historical data supports the growing magnitude of these health issues.

HISTORIC TRENDS

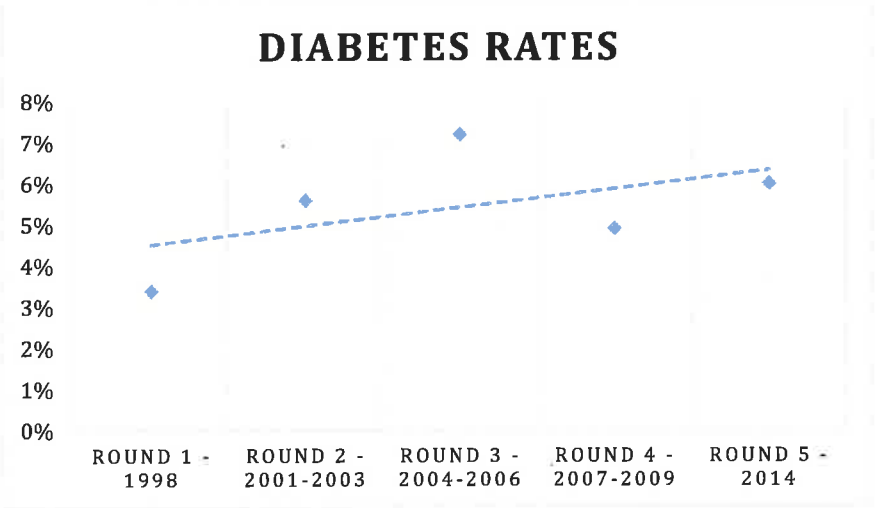


Hypertension rates have increased dramatically. Between the first round of the I-BRFSS in 1998 and the Lake County Community Health Survey in 2015, the percentage of adults reporting that they have hypertension has increased from 18% to 35%, nearly doubling over the interval. While some demographic shifts such as an aging population can help to explain some of the increase in disease, the burden of the condition is ultimately much higher now than in the past.

SELECTED COMMUNITY HEALTH PRIORITIES



Obesity contributes to an individual's risk of chronic conditions, osteoarthritis, and other health issues that disrupt quality of life. While obesity rates in the county remain slightly lower than the state, obesity has increased by 5% in the past 12 years. The percentage of adults who are overweight has remained relatively stable. 62% of adults in Lake County are overweight or obese. While complete or historical data sets do not exist in Lake County for children, childhood obesity is an emerging national and state priority.



Diabetes in adults has increased over time from 3.4% to 6%. An additional 14% have been diagnosed with prediabetes and are at greater risk of developing the disease.

Summary Assessment Results

LOCAL PUBLIC HEALTH SYSTEM ASSESSMENT

Lake County's Local Public Health System Assessment was convened by the Live Well Lake County Steering Committee on June 18th, 2015 at Rosalind Franklin University. The Local Public Health System Assessment (LPHSA) is one of the four assessments Lake County is working on as part of its Mobilizing for Action through Planning and Partnerships (MAPP) process. MAPP is a community-driven strategic planning framework utilized in community health improvement. This framework assists communities not only in the prioritization of public health issues, but in creating a platform to develop and implement efforts to address them, leading to action.

Assessment Instrument

The National Public Health Performance Standards Program (NPHPSP) is a collaborative effort of seven national partners to enhance the Nation's public health systems. This program has established a local assessment instrument to measure the performance of local public health systems (LPHS)--defined as the collective efforts of public, private and voluntary entities, as well as individuals and informal associations that contribute to the public's health within a jurisdiction (for a list of assessment participants, please see Appendix A on page 148). The purpose of the NPHPSP local instrument is to improve public health system performance. The instrument assists in doing the following:

- Complete the local public health system assessment with documented discussion and scores related to each performance measure.
- Enhance the understanding of the public health system.
- Build relationships within the public health system.
- Foster an interest and awareness in performance improvement.

The instrument is framed around the 10 Essential Public Health Services that are utilized in the field to describe the scope of public health. For each essential service in the local instrument, there are model standards that describe or correspond to the primary activities conducted at the local level. There are a total of 30 model standards in this instrument. For each model standard, there are a series of discussion questions that break down the standard into its component parts. After completing the discussion questions, participants vote on the performance measures of the model standard. A consensus of participant votes is required to finalize the score of each performance measure. The scores of the performance measures determine the final score of the corresponding essential service. The scoring system utilized for the essential services, model standards, and the performance measures is below:

SUMMARY ASSESSMENT RESULTS

LPHSA Scoring Chart

Optimal Activity	*(76-100%)*	Greater than 75% of the activity described within the question is met.
Significant Activity	*(51-75%)*	Greater than 50% but no more than 75% of the activity described within the question is met.
Moderate Activity	*(26-50%)*	Greater than 25% but no more than 50% of the activity described within the question is met.
Minimal Activity	*(1-25%)*	Greater than zero but no more than 25% of the activity described within the question is met.
No Activity	*(0%)*	0% or absolutely no activity.

Assessment Methodology

The assessment began with an opening 60-minute plenary session to welcome participants, provide an overview of the process, introduce the staff, and answer questions. The opening plenary session also consisted of activities to introduce participants to specific concepts of the assessment process and keep them engaged throughout the day. Participants were then broken into five groups; each breakout group was responsible for conducting the assessment for two essential public health services (EPHS). Throughout the day, participants helped build a connectedness diagram to map the Local Public Health System (Appendix B, page 151). Participants also provided a word to describe what makes them passionate about their work. Their responses were used to generate a Wordle (Appendix C, page 152).

Each group was professionally facilitated by a trained facilitator and discussion notes were captured by a recorder. The day ended with a plenary session where improvement opportunities of each essential service were reported by participants of each group. During this time, participants were also given an opportunity to provide feedback on the event through a written survey. The end-of-day dialogue outlined the next steps of the assessment process and encouraged participants to contact the Live Well Lake County Steering Committee for further involvement in MAPP activities.

SUMMARY ASSESSMENT RESULTS

Assessment Findings

1. **Surveillance Capacity and Data Sharing**

   Surveillance is the continuous collection, analysis, and interpretation of health-related data needed for planning, implementation, and evaluation in public health practice. It is important for the local public health system to have the capacity for surveillance of a number of conditions, including chronic diseases, infectious disease outbreaks, mental health conditions, and reportable diseases. The data collected should be accessible and shared within the local public health system and with the general public.

2. **Increasing Health Equity Education**

   Health inequities are differences in population health status and health conditions that are systemic, patterned, unfair, unjust, and actionable. These differences are avoidable, and arise from social and economic inequalities, including socio-economic status, race/ethnicity, age, and sex/gender. Health equity education helps in reducing health inequities in the community.

3. **Public Health System Awareness- General Public**

   To navigate the local public health system competently, education and awareness of the system and its activities should be continuously disseminated to the general public.

4. **Evaluating Population-Based Health Services**

   Effective evaluations of population-based health services are necessary for improving and guiding public health activities; ensuring evidence-based decision-making and action; making efforts outcome-oriented; and ensuring accountability.

5. **Public Health System Awareness- Community Partners and Stakeholders**

   A well-functioning public health system has strong partnerships where partners recognize they are part of the public health system through continuous channels of communication, resource sharing, as well as data sharing.

6. **Linkage Between Academia and Public Health Practice: Research Infrastructure**

   To improve public health practice, education and research, it is important to coordinate and collaborate with academic and research based institutions. Collaboration is important not only to ensure development of a well-trained, competent workforce, but to strengthen the use of evidence-base practices in public health.

7. **Continuous Quality Improvement**

   Continuous Quality Improvement (CQI) is a process to ensure programs are systematically and intentionally improving services. CQI is a process-based, data-driven approach to improving the quality of product or service. The ongoing process involves the *Plan, Do, Study, Act* cycle.

8. **Linkage to Personal Health Services**

   Personal health services include all services dealing with the promotion, maintenance, and restoration of health. Provision of services to the general public depends on the availability of key resources as well as effective care coordination.

SUMMARY ASSESSMENT RESULTS

FORCES OF CHANGE ASSESSMENT

The Forces of Change Assessment is designed to help key community stakeholders answer the questions: "What is occurring or might occur that affects the health of our community or the local public health system?" and "What specific threats or opportunities are generated by these occurrences?"

Assessment Instrument

The Live Well Lake County Steering Committee began the assessment by brainstorming potential forces of change across five broad categories: political, environmental, legal/ethical, social/economic, and technological/scientific. Within each category, the group was asked:

- *What forces are occurring or might occur that affects the health of our community or the local public health system?*
- *What specific threats or opportunities are generated by these occurrences?*

Assessment Methodology

Participants brainstormed potential forces and shared them with facilitators. Like-minded themes were grouped using an affinity diagram to identify overarching forces that shape or influence the public health system and community. The effects of these forces may have an impact on any part of the public health system, including resources, strategic issues, infrastructure, culture, or the environment.

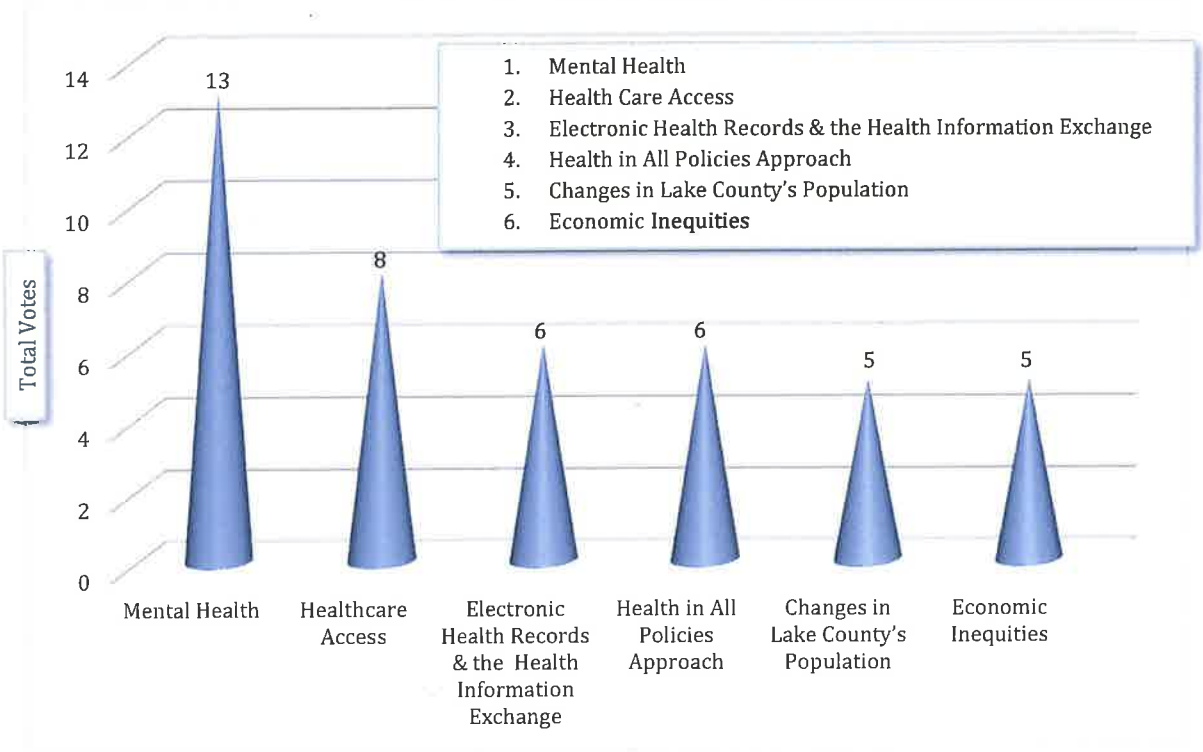
Forces	
Trends	Patterns over time
Events	One time occurrence
Factors	Discrete elements

To identify methods to enhance or mitigate the effects of these forces, participants then identified threats posed and opportunities created within each force. Participants also acknowledged additional information that was needed within the system to appropriately address specific forces as well as local organizations that were believed to have experience or knowledge to address barriers. Participants completed this process for each of the five categories and then thoughtfully considered what his/her top priorities were regarding the most influential forces of change for Lake County. The forces perceived to be most impactful can be found in the summary of results.

Assessment Results

Results of the FoCA shed light on potential forces that may affect the local public health system's capacity to implement the Community Health Improvement Plan and thus improve the health status of those who live, work, play and pray in Lake County. Live Well Lake County will be proactive in leveraging collaborative partnerships to address expected forces through the identification of social, scientific, technological, organizational and institutional resources. While all identified forces should be considered, those six ranked (see table below) as having the most impact on the county should be given priority when identifying and building system capacity to address strategic issues. Several forces may be unique to the current assessment, while others may also appear during one of the other MAPP assessments.

SUMMARY ASSESSMENT RESULTS



SUMMARY ASSESSMENT RESULTS

COMMUNITY THEMES AND STRENGTHS ASSESSMENT

The Community Themes and Strengths Assessment (CTSA) was conducted by the Live Well Lake County Steering Committee with guidance from the LCHD/CHC between October 2015 and December 2015. The CTSA focuses on opinions and perceptions of residents regarding the quality of life and health in the community as well as community assets. It creates a portrait of the community seen through the eyes of the residents.

Assessment Instrument

The assessment was divided into three categories:

1. Community Strengths Survey
2. Focus Groups
3. Photovoice

Assessment Methodology

Community Strengths Survey

The Community Strengths Survey was conducted to understand the opinions and perceptions of Lake County residents regarding the quality of life and health in their community. The survey was developed through a CTSA workgroup that consisted of members of the Live Well Lake County Steering Committee and LCHD/CHC staff. A total of 14 survey questions were developed that focused on demographics, quality of life, health, and strengths in the community (Appendix D, page 153).

The survey was distributed online and through paper copies and was available in English and Spanish. The online survey link was distributed to community partners and organizations throughout Lake County through the Live Well Lake County Steering Committee and LCHD/CHC email list-serves, website posts, newsletters, flyers, and social media messages. The link was accompanied by a message that encouraged individuals to forward the link to others to increase the reach of the survey in the community.

The primary focus of distribution for the paper copies was organizations that are able to reach residents who may not have the opportunity to take the survey online. Paper copies were also distributed to organizations that normally have a large amount of residents who visit their location on a daily basis. The paper copies were given as a package, with a box for completed surveys, promotional material in English and Spanish, documents that explained how to distribute the survey, and answers to frequently asked questions.

Focus Groups

Using a health equity lens, focus groups were conducted to provide a voice to underserved and underrepresented populations. The results helped to provide further insight into the survey findings through intensive discussions with residents on their perceptions of quality of life and health in their communities. The in-depth questions that were developed for the focus groups were based off of the questions from the Community Strengths survey (Appendix E, page 159).

Groups were selected to provide an equitable representation of demographics, including race, ethnicity, language, and socioeconomic status. Four focus groups were conducted: (1) African Americans, (2) persons with physical disabilities and/or visual impairments, (3) Korean Americans conducted in Korean, and (4) recent Latino immigrants conducted in Spanish. The Live Well Lake County Steering Committee, along with the LCHD/CHC partnered with community-based organizations to help with participant recruitment and hosting the focus groups.

A total of 42 adults participated across the four focus groups. The group size for each ranged from 8-14 participants with discussions lasting between 60 and 90 minutes. One health department staff member facilitated the conversation while another took notes. The conversations were audio recorded to accurately capture all of the ideas and opinions of the participants. Two of the groups were conducted in languages other than English: Korean and Spanish. The organizations that hosted focus groups in Korean and Spanish provided a staff member to facilitate language translation between the focus group facilitator and the participants.

To promote consistency in data collection and reporting, a focus group facilitator guide, note-taker template, and focus group summary table were developed. The focus group facilitator guide included: recommendations on how to conduct and record a focus group session; logistics and materials; and a script for the facilitator to follow. In an effort to ensure the anonymity of the participants, names were not collected and all introductions were conducted prior to audio recording.

After the focus groups were conducted, the data was transcribed, analyzed, and interpreted. The results of each individual focus group were analyzed separately and then analyzed collectively with the other focus groups. The transcriptions were coded and categorized by question.

SUMMARY ASSESSMENT RESULTS

Photovoice

Photovoice is a research tool used to gain community-level perspectives from target populations using photography as a means of expression. The three main goals of Photovoice are to (1) enable people to record and reflect their community's strengths and concerns, (2) to promote critical dialogue and knowledge about important issues through group discussion of the photographs, and (3) to reach policymakers[1]. The Live Well Lake County Steering committee utilized Photovoice to answer the following questions: (1) "How does your community positively and negatively affect your health?" and (2) "How does your community prevent or allow for behaviors which can lead to obesity?"

High school students in Lake County were selected as participants in this project to provide a platform for youth to voice their opinions on community health; to educate youth on public health concepts; and engage youth in the community health improvement process. Participants were purposefully recruited from schools and youth advocacy groups that were geographically and socioeconomically diverse. The following groups were recruited:

- Adlai E. Stevenson High School's HOSA group (Health Occupation Students of America). Seven students from HOSA participated. Adlai E. Stevenson High School is located in Lincolnshire (South Central Lake County) and provides representation of a middle upper class to upper class socioeconomic status.
- Zion-Benton Township High School's photography class. The photography teacher made Photovoice part of the coursework. Thirteen students from the class participated. Zion-Benton High School is located in northeast Lake County, representing diverse socioeconomics and racial/ethnic composition.
- REALITY Illinois and the Youth Advisory Board groups in the greater Gurnee area and the greater Lake Zurich area. REALITY Illinois and the Youth Advisory Board group are a tobacco and alcohol policy and advocacy group created by and for Illinois teens. It is funded by the Illinois Department of Public Health and the Lake County Underage Drinking and Drug Prevention Task Force. A total of fifteen students participated from REALITY Illinois across the two group locations. Both locations provide a broad representation of central and south western Lake County.

SUMMARY ASSESSMENT RESULTS

Assessment Results

The table below contains a summary of the overarching themes found throughout the CTSA. The categories indicate which assessment tool identified the themes as well as which themes were found as strengths, improvement opportunities, and health issues.

	Survey	Focus Group	Photovoice
Community Strengths			
Community Safety	x		x
Active Living	x	x	x
Access to Health Care	x	x	
Education	x	x	
Family Focus		x	
Spiritual Support	x	x	
Transportation	x	x	x
Food Environment		x	x
Improvement Opportunities			
Competent and Culturally Sensitive Workforce		x	
Financial Support	x	x	
Transportation	x	x	x
Family Focus		x	
Food Environment		x	x
Community Involvement		x	x
Health Issues			
Substance use	x		x
Chronic Disease	x	x	x
Poor diet and inactivity	x	x	x
Mental Health		x	
Older adult health and health care		x	
Health information and awareness		x	

SUMMARY ASSESSMENT RESULTS

The community-identified top 10 priorities were selected from overarching health issues found in the Community Strengths survey, focus groups, and Photovoice. The health issues were then ranked based on survey responses, topics that were heavily discussed in the focus groups, and photos taken by students.

Rank	Priority
1	Poor diet and inactivity
2	Chronic Disease (obesity, diabetes, heart disease, high blood pressure, stroke, cancer)
3	Substance use (tobacco, alcohol, and drug use)
4	Safe Affordable Housing
5	Older Adult Health (arthritis, hearing/vision, Alzheimer's disease/Dementia)
6	Community Safety (community violence and domestic violence)
7	Food Environment (Availability of affordable, healthy food)
8	Mental Health
9	Cultural Sensitivity and Linguistic Capacity
10	Health Literacy

SUMMARY ASSESSMENT RESULTS

COMMUNITY HEALTH STATUS ASSESSMENT

Lake County's Community Health Status Assessment was conducted from July 2015 through January 2016. During this time, LCHD/CHC collected, analyzed, and interpreted a variety of primary and secondary data from across sectors and sources. Data were used to develop a comprehensive understanding of the health of the community at large and the systems in which Lake County residents live, work, and play.

Assessment Instrument

Data were collected to provide a comprehensive understanding of the health conditions and behaviors of individuals within the community and systemic features in the community that can help or hinder a person's health or quality of life. The Community Health Status Assessment focuses on quantitative health information rather than the qualitative or interpretive information of system participants. Community health status measures can be compared against other county, state, and national measures to better understand a community's strengths and opportunities for improvement. It allows community members to see markers of health for residents and the community as they are at the time of the assessment.

Information was organized into 11 distinct categories that capture the defining features of a community: Demographic Characteristics, Socioeconomic Characteristics, Health Resources Availability (General Health and Access to Care), Quality of Life, Behavioral Risk Factors, Environmental Health Indicators, Social and Mental Health, Maternal and Child Health, Morbidity and Mortality (Death, Illness, and Injury), Infectious Disease, and Sentinel Events.

Assessment Methodology

The CHSA contains the essential quantitative indicators necessary for the community health improvement planning process. Because community health crosses so many sectors, the data collection strategy and sources must reflect a diverse set of conditions, contributors, and indicators. Indicators were selected to provide a robust assessment of the community as a whole.

Secondary data is any data set that is collected by another entity for purposes other than the immediate project at hand. The more complete, regular secondary data sets are fundamental resources for the planning process. While secondary data resources provide a solid foundation from which to assess community health, these do not provide a complete picture of health in Lake County. Priorities from community partners challenge LCHD/CHC to explore alternatives to capture information on areas not covered by other data sets. Data sets related to mental health and substance abuse (behavioral health) are rarely available at the local level. Primary data collected by LCHD/CHC is helping to fill the gap.

SUMMARY ASSESSMENT RESULTS

Assessment Results

Demographic Characteristics

Lake County is growing increasingly diverse:

Race or Ethnic Group	2000	2014
Hispanic or Latino (of any race)	13.4%	20.5%
White alone	68.2%	64.2%
Black or African American alone	6.4%	6.6%
Asian	3.6%	6.5%
Some other race or combination of races	8.4%	2.2%

Socioeconomic Characteristics

Poverty is an emerging issue among all groups in Lake County:

Percent of Population in Poverty by Race and Ethnicity	2010	2014
White	5.4%	8.0%
African American	18.9%	26.3%
Hispanic	13.8%	17.6%
Asian American	3.7%	5.5%
All Lake County	7.0%	9.4%

Health Resources Availability

The rate of health insurance has changed dramatically since 2010.

Percent of Population Without Health Insurance[5]	2010	2014
White	9.8%	8.6%
African American	13.8%	10.4%
Hispanic	31.1%	23.0%
Asian American	12.8%	8.0%
All Lake County	12.4%	8.7%

[5] American Community Survey 2014 1-year Average. American Community Survey 2010 1-year average

SUMMARY ASSESSMENT RESULTS

Quality of Life

13% of adults in Lake County describe their health as "Fair" or "Poor," slightly better than the overall Illinois rate of 17% and nearly equivalent to the 90th percentile in the United States (12%).[6]

Behavioral Risk Factors

About 68% of adult residents exercise for 30 minutes or more for three or more days per week. 36% of adults exercise five or more days per week. On average, adults in Lake County exercise 3.5 days per week.[7] Only 15% of adults in Lake County eat five or more fruits and vegetables per day. 49% of adults in the county have two or fewer fruits and vegetables per day. On average, adults in the county eat about 2.9 fruits and vegetables per day.

Environmental Health Indicators

An average of 18 new lead cases were opened annually from 2010-2015, resulting in a rate of about 2 cases per 1,000 blood draws. From 2010 to 2015, the proportion of "Good" days for air quality exceeded 86% for each individual year; from 2013 to 2015, "Good" days were 93% or more. In 2012, excessively hot and humid conditions are thought to have reduced air quality in Lake County, resulting in a total of 17 days that were considered "Unsafe for Sensitive Groups" and two days that were "Unhealthy Days." This year was an outlier compared to the other years.

Social and Mental Health

36% of adults in Lake County had one or more days of "not good" mental health in the past month and 14% of adults had been unable to perform normal tasks because of poor mental health for a day or more in the past month. On average, mental health prevents usual activities for 0.9 days per adult.

Maternal and Child Health

From 2010-2013, 74.0% of births carried to term in Lake County received care during their first trimester. The average rate of adolescent births was 19.6 per 1,000 adolescent women, lower than the 2011 rate in Illinois (29.5) and the United States (31.3). 7.4% of births in Lake County were considered low birthweight (below 2500g), better than Illinois (8.2%) and United States (8.0%) rates. 9.4% of babies in Lake County were born premature, lower than the overall rates for Illinois (10.1%) and United States (11.4%).

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[6] County Health Rankings 2016

[7] LCHD 2015 Community Health Status Survey

SUMMARY ASSESSMENT RESULTS

Death, Illness, and Injury

The LCHD 2015 Community Health Status Survey and Secretary of State records provided the timeliest rates of a variety of health conditions:

Chronic Disease	Percent of Lake County[8]
Chronic Obstructive Pulmonary Disease	4%
Skin Cancer	8%
Some other type of Cancer	6%
Arthritis	21%
Kidney Disease	3%
Heart Attack	3%
Heart Disease (Any)	6%
High Blood Pressure/Hypertension	35%
Stroke	1%
Diabetes (Excluding Gestational)	6%
Pre-Diabetes	14%
Asthma	12%
Obesity[9]	23%

[8] LCHD 2015 Community Health Status Survey

[9] Secretary of State, 2010-2014

SUMMARY ASSESSMENT RESULTS

These are the top ten causes of death in Lake County, from 2010-2014:

Cause of Death[10]	Crude Rate per 100,000
Cancer	149.2
Diseases of the Heart	133.6
Chronic Lower Respiratory Diseases	30.2
Cerebrovascular Diseases (Stroke)	28.9
Accidents (Unintentional Injuries)	25.1
Diabetes Mellitus	18.5
Alzheimer's disease	16.2
Nephritis, nephrotic syndrome and nephrosis	13.7
Influenza and pneumonia	12.9
Intentional self-harm (suicide)	9.8

Infectious Disease

From 2012-2015, the overall rate of Chlamydia was 28.4 per 10,000 Lake County residents. Rates of gonorrhea across the county were 5.2 per 10,000 residents. Early syphilis was diagnosed in 0.2 per 10,000 residents over this window. This burden is highly dependent on geography, race and ethnicity, age, and sex.

Sentinel Events

Drug overdose deaths in 2014 (largely driven by opioids) for Illinois occurred at an age-adjusted rate of 13.1 per 100,000 residents.[11] In Lake County, deaths to all drugs in 2015 were 9.8 per 100,000 residents. Of those, 84% were caused by opiates.[12] Deaths do not capture the full burden of prescription and illicit opioid use. While county data are not available for rates of opioid abuse, an important risk factor begins with legal use of prescription opioids. In the past year, 15% of adults in Lake County reported that they had been prescribed an opioid drug in the past twelve months.[13] If this medication is not managed properly and attentively by the prescribing doctor, individuals prescribed opioids or others in their household can develop dependence or abuse these drugs.

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[10] CDC WONDER 2010-2014.

[11] Rudd, R.A, Aleshire, N., Zibbell, J.E., & Gladden, M. (2016) "Increases in Drug and Opioid Overdose Deaths – United States, 2000-2014. MMWR.

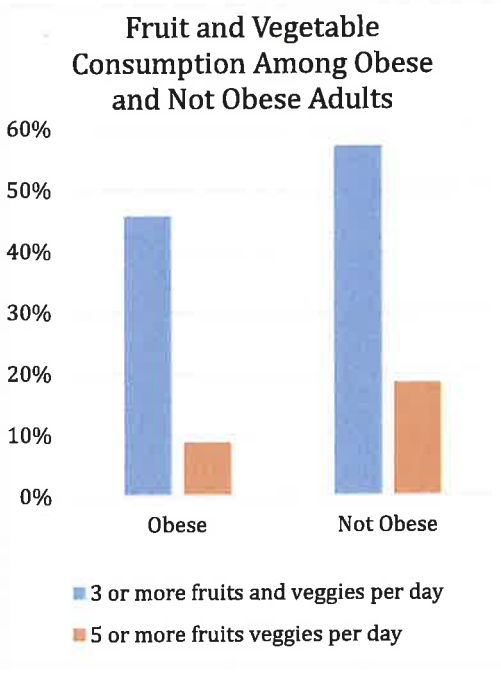
[12] Lake County Coroner Drug Overdose Deaths for 2015.

[13] LCHD 2015 Community Health Status Survey.

Contributing Factors

HEALTH BEHAVIORS AND CHRONIC CONDITIONS

When identifying gaps in health behaviors and systemic factors that might lead to adverse health outcomes, local data are especially important to understanding the challenges and opportunities that are unique to the Lake County community. For example, obese and not obese individuals were found to have different rates of certain health behaviors related to nutrition and physical activity. These gaps drive the prevention and management needs of Lake County.

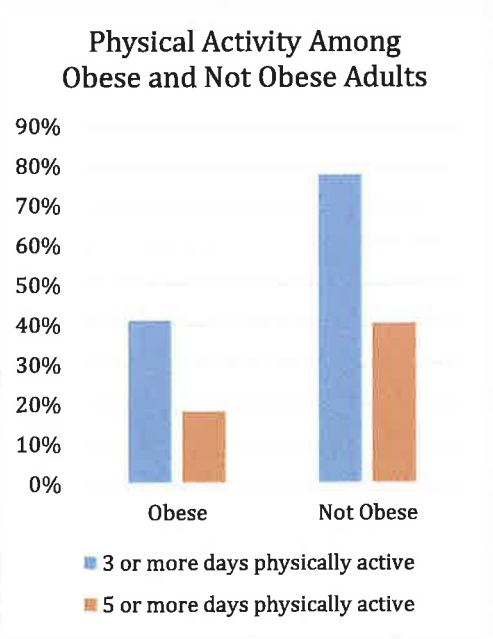


Nutrition

Through the Lake County Community Health Survey, we know that community members who are affected by obesity are participating in fewer health-promoting behaviors than those without the condition. Obese individuals were about 25% less likely than individuals who were not obese to have had three or more servings of fruits and vegetables per day and only half as likely to have had five or more servings of fruits and vegetables per day. Most adults, regardless of weight status, are not eating the recommended servings of fruits and vegetables per day, but those with obesity are even less likely to be getting enough.

Physical Activity

In a similar way, the survey revealed that obese individuals are only half as likely as their not obese peers to get at least three days of 30 minutes of exercise per week and less than half as likely to be active for 30 minutes for five or more days per week. Adults in both categories are not meeting weekly physical activity needs, but the gap is greater among individuals with the chronic condition.



CONTRIBUTING FACTORS

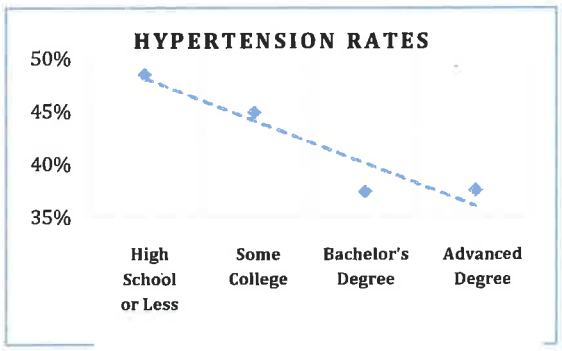
SOCIAL DRIVERS

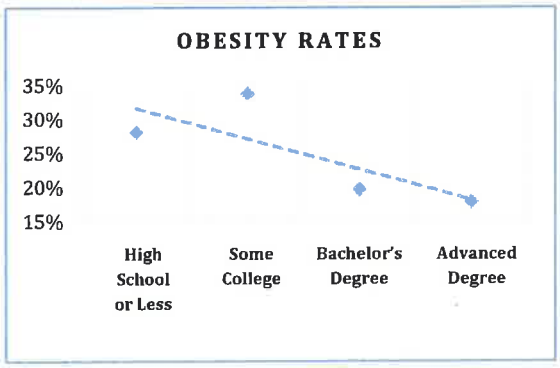
Socioeconomic status greatly influences an individual's health status. Through the survey tool, educational attainment and income were found to be related to rates of the priority conditions. Improved educational attainment and increased household income reduced overall rates of hypertension, obesity, and diabetes. The trends identified here do not directly correspond to the overall rates in Lake County because stratifying by educational attainment created comparative populations with a higher average age; however, average age between groups is comparable.

EDUCATIONAL ATTAINMENT

When community health surveys were stratified by educational attainment, disparities emerged between groups by highest level of education. Educational attainment has a protective effect that increases with dose, that is, the higher an individual's level of education, the less likely that person is to experience an adverse health outcome.

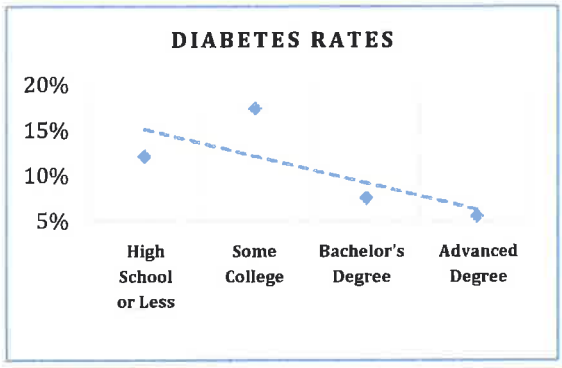
For **hypertension**, the condition remains common across all education levels. Individuals with bachelor's and advanced degrees are still affected by the condition, but at rates about 10% lower than their peers with high school or less as their highest level of education. Those with some college or technical degrees fell in the middle of the range.





Obesity was also found to be mediated by level of education. Those with less than a bachelor's degree had 8% higher rates of obesity, or nearly 50% more likely to be obese.

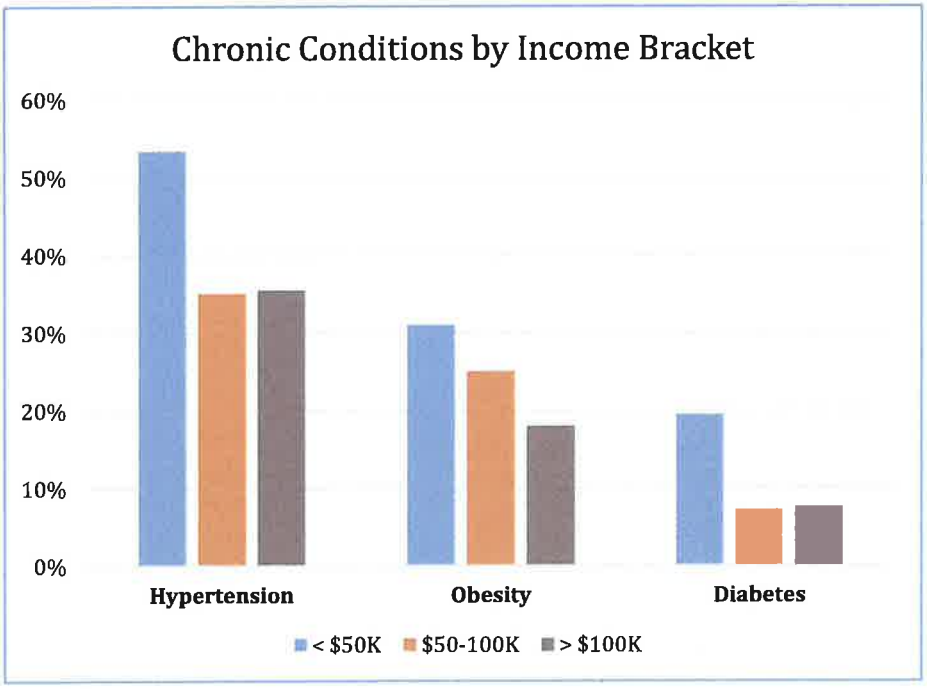
In a similar way, **diabetes** was highly mediated by education level, where those with a high school degree or less had 6% higher rates of diabetes, or about 40% more likely than those with a bachelor's to have been diagnosed with the condition.



CONTRIBUTING FACTORS

INCOME

Income represents resources that can support health and wellbeing. Lake County's income breaks relatively evenly into three groups: households making less than $50,000 per year, households making between $50,000 and $100,000 per year, and households making more than $100,000 per year. By comparing income brackets and relative rates for the priority conditions, patterns emerge for the prevalence of these conditions.



For **hypertension**, individuals from the lowest third of households responding reported rates of the condition at about 18% higher rates. These individuals were about 50% more likely than those in either of the other two brackets to experience hypertension. Individuals in the $50,000-$100,000 and > $100,000 brackets are still affected by hypertension but with less frequency than those in the lowest income bracket.

Obesity follows a different, more linear pattern. Each of the three income brackets had different rates of obesity. A gap of 13% was found between those in the lowest third and those in the highest. The middle income bracket nearly split the difference between the two groups. For more information on how household income is related to obesity rates, refer to the "Obesity in Lake County: 2015 Status Report."

Diabetes followed a pattern similar to hypertension. The lowest income bracket faces the highest burden, with relative rates more than double those in the highest two brackets. The middle and high income groups have similar, lower rates.

Community Health Status Assessment

MATERIALS AND METHODS

The CHSA contains the quantitative indicators necessary for the community health improvement planning process. Because community health crosses so many sectors, the data collection strategy and sources must reflect a diverse set of sectors and indicators.

SECONDARY DATA

Secondary data is any data used by an entity that did not generate or collect that data, oftentimes for purposes other than the original purpose. The more complete, timely secondary data sets are fundamental resources for the planning process. For example, the American Community Survey from the United States Census tracks demographic, economic, education, and other social characteristics of communities at different geographic scales from census blocks to national figures. For this Assessment, data from the American Community Survey 5-Year Average for 2010-2014 were used unless otherwise noted. These represent the most complete, timely estimates available on the residents of Lake County. The Illinois State Police publish annual rates of crimes as required by the Uniform Crime Reports system. Illinois's Department of Children and Family Services reports investigations and cases of child abuse and neglect. Social factors provide context for health outcomes.

The most comprehensive health information comes from the Illinois Department of Public Health (IDPH). IDPH shares records of birth, death, and hospital discharges that can be used to understand adverse pregnancy outcomes, mortality, and hospital usage patterns. IDPH also administers the Illinois Behavioral Risk Factors Surveillance System (I-BRFSS) survey, a questionnaire created by the Centers for Disease Control and Prevention to assess health conditions and behaviors, typically to describe state-level prevalence rates. In Illinois, the data are available for counties. The results from the I-BRFSS are published intermittently and reflect the priorities of CDC and IDPH but do not capture all the topic areas that would be most useful for Lake County.

For other local data, models from major national organizations can be used to assess the relative condition of the county. Oftentimes, the County Health Rankings (a program of the University of Wisconsin Public Health Institute) will acquire and process other data sets to provide comparative data for individual counties. Feeding America publishes an annual report that estimates the prevalence of food insecurity by county. These data account for demographic and economic characteristics of the community and estimate the prevalence of health factors and the general burden of a determinant or health condition.

Oftentimes, data are collected for other uses and public health information can only be determined through secondary modelling. For example, data acquired from the Illinois Secretary of State was cleaned, corrected, and transformed to determine relative rates and distribution of obesity for communities in Lake County.

PRIMARY DATA

While secondary data resources provide a solid foundation for a community health assessment, these do not provide a complete picture of health in Lake County. Community partners challenge LCHD/CHC to explore alternatives options and capture information on areas not covered by other data sets. Most prevalence data, especially for mental health and substance abuse, are only available at the state or national level. Primary data collected by LCHD/CHC can help to fill the gap. To achieve this, LCHD/CHC conducted a survey to collect health data directly from county residents.

Questions were modeled after the Behavioral Risk Factors Surveillance System (BRFSS) survey. Most questions were taken directly from current or previous surveys and were selected because of their importance to LCHD/CHC and its community partners. For new topic areas, questions were written to match language style and reading level of the borrowed questions. Questions were tested internally in both English and Spanish by LCHD/CHC staff. Questions were then externally tested for clarity, length, and neutrality by volunteers recruited from the Lake County Health Department and Community Health Center Belvidere Medical Building and Mid-Lakes clinics. Each new question was reviewed at least ten times both internally and externally in both languages to ensure that questions would be understood by community members. Staff at the community partner Mano a Mano Family Resource Center volunteered time to review the Spanish language material to ensure that grammar and phonetics were appropriate.

LCHD/CHC utilized a mixed-methods survey to collect responses from the community. Invitations were sent to 5,000 randomly-selected households from a near-complete list of occupied residences made available by a query of records from the Lake County GIS Program. Recipients were invited to participate through their method of choice. Participants were able to complete the survey through either an online option or a toll-free, call-in option where individuals would respond to a pre-recorded survey and use the phone's number pad to indicate responses. Both versions of the survey were available in English and Spanish. Households received two reminder postcards at two and four weeks after receipt of the invitation. The survey accepted responses for ten weeks.

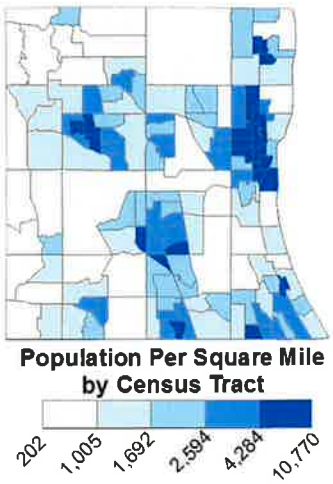
The raw results were compiled into a single spreadsheet and reviewed. Responses were categorized by demographic information provided by the respondents – age and gender – to produce a county figure for responses to each question. The values reported out in this document reflect this weighting strategy and not crude values. Weighting allows for a representative picture of the population to be produced from the responses received.

For more information on the methodology development or results, please contact the
Lake County Health Department Assessment Team at HealthAssessment@lakecountyil.gov

RESULTS

DEMOGRAPHIC CHARACTERISTICS

Lake County is an increasingly diverse community. While the population has remained relatively stable since the 2010 (with 703,462 in 2010 the 2010 Census an estimated 703,170 from the American Community Survey 5-year Estimate from 2010-2014), many of the demographic trends that defined the first decade of the twenty-first century have continued to shape Lake County's population characteristics. [18] Overall, Lake County has a population density of 1,462 residents per square mile but varies considerably. Urban areas in eastern Lake County have census tracts with more than 5,000 persons per square mile while much of northern and western Lake County have fewer than 1,000 residents per square mile.



DEMOGRAPHICS

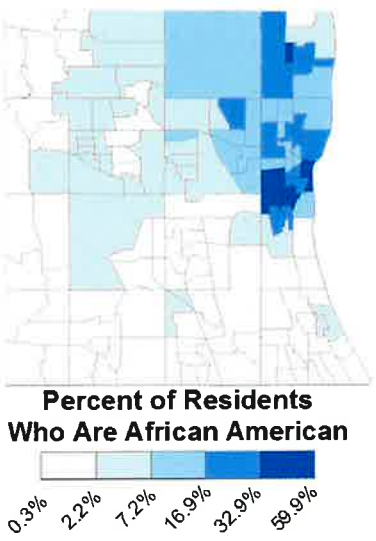
About 64.2% of residents are non-Hispanic white. Residents identifying as Hispanic or Latino represent about 20.5% of all residents in Lake County. 6.6% of residents are African American. Asian Americans include 6.4% of Lake County residents.[19]

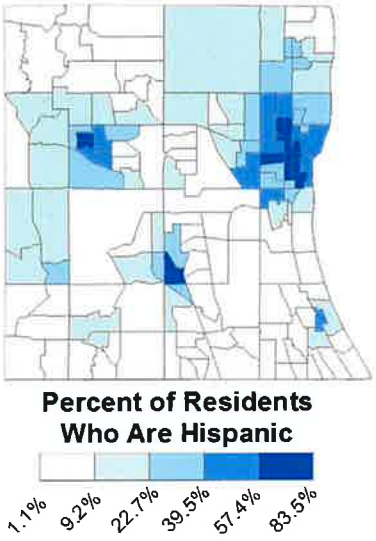
The total number of Latino residents has increased by 55.1% since 2000, from 92,716 to 143,841 in 2014. The number of African Americans in the county has increased slightly, by about 4.3%, from 44,741 to 46,644. Over the same interval, the total number of Asian American residents has increased by 81% between 2000 and 2014, from 25,105 to 45,556. The non-Hispanic white population has contracted by about 4.5%, from 472,968 in 2000 to 451,700 in 2014.[20] Changes in population are not uniform across the county and potentially represent pockets of culturally-specific health needs.

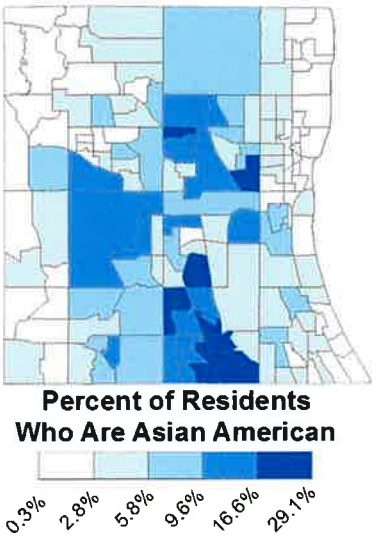
Race or Ethnic Group	2000 Census	Percent of Population 2000	2014 ACS Estimates	Percent of Population 2014	Percent Change
Hispanic or Latino (of any race)	92716	13.4%	143841	20.5%	55.1%
Black or African American alone	44741	6.4%	46644	6.6%	4.3%
Asian	25105	3.6%	45556	6.5%	81.5%
White alone	472968	68.2%	451700	64.2%	-4.5%

[18] American Community Survey 5-Year Average 2010-2014
[19] American Community Survey 5-Year Average 2010-2014
[20] American Community Survey 5-Year Average 2010-2014

Race and Ethnicity Distribution in Lake County by Census Tracts

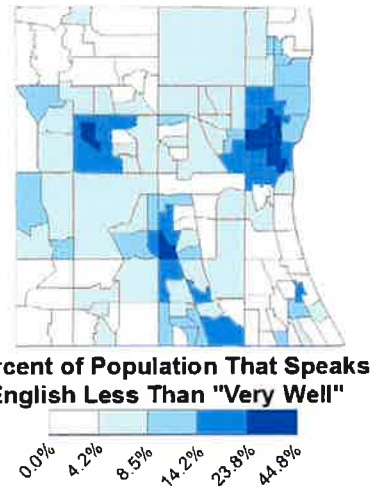






LANGUAGE

Increasing linguistic diversity reflects changes in the social and cultural landscape of Lake County. 184,729 residents, about 28% of people over the age of five, speak a language other than English at home. 112,961 residents, about 17% of the population, speak Spanish or a Spanish Creole. The number of Spanish-speaking individuals has grown by about 5%, an additional 4,888 Spanish-speaking persons in 2014 than 2010. Speakers of other Indo-European languages represent 6% of Lake County and increased by 1,081 since 2010. Asian language speakers also increased to 4% of Lake County's population, growing by 2,203 speakers since 2010. These figures indicate cultural shifts. While 28% of residents speak a language other than English at home, 10.5% speak English "less than very well."[21] Certain communities have higher proportions of individuals who speak English less than very well and might face linguistic barriers to health resources if these resources are only available through English language avenues.



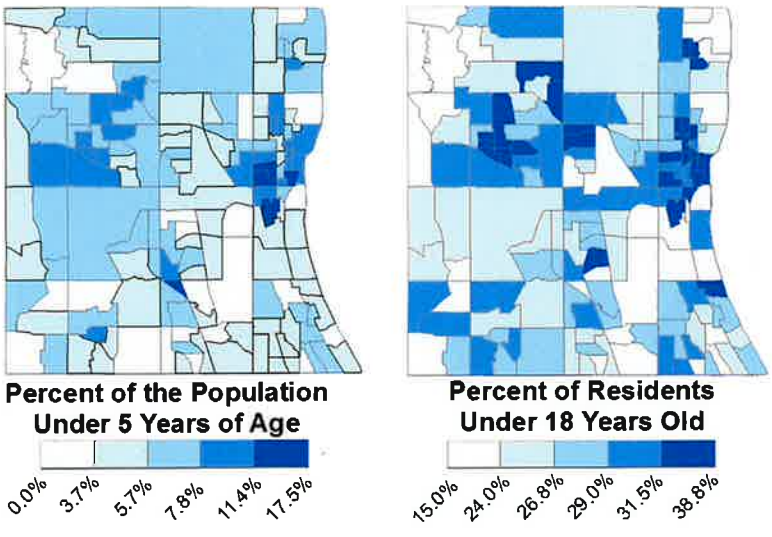
[21] American Community Survey 5-Year Average 2010-2014

Language Spoken at Home	2014 Count	2010 Count	Change	Percent 2014	Percent 2010	Percent Change
Population 5 years and over	659,159	648,261	10,898	-	-	1.7%
Speak only English	474,430	472,210	2,220	72.0%	72.8%	0.5%
Speak a language other than English	184,729	176,051	8,678	28.0%	27.2%	4.9%
• **Spanish or Spanish Creole**	112,961	108,073	4,888	17.1%	16.7%	4.5%
• **Other Indo-European languages**	40,781	39,700	1,081	6.2%	6.1%	2.7%
• **Asian and Pacific Island languages**	27,710	25,507	2,203	4.2%	3.9%	8.6%
• **Other languages**	3,277	2,771	506	0.5%	0.4%	18.3%

AGE

Changes to Lake County's racial and ethnic composition have also been accompanied by shifts in age in the county. Between 2000 and 2014, the median age in the county increased from 33.8 to 37.2. The total number of births annually has declined since 2010. There are almost 9,000 fewer young children (under the age of 5) in Lake County than in 2000, dropping from 52,978 (8.2% of the population in 2000) to 44,011 (about 6.3% in 2014).[22] The changes seen in the county totals are not evenly distributed.

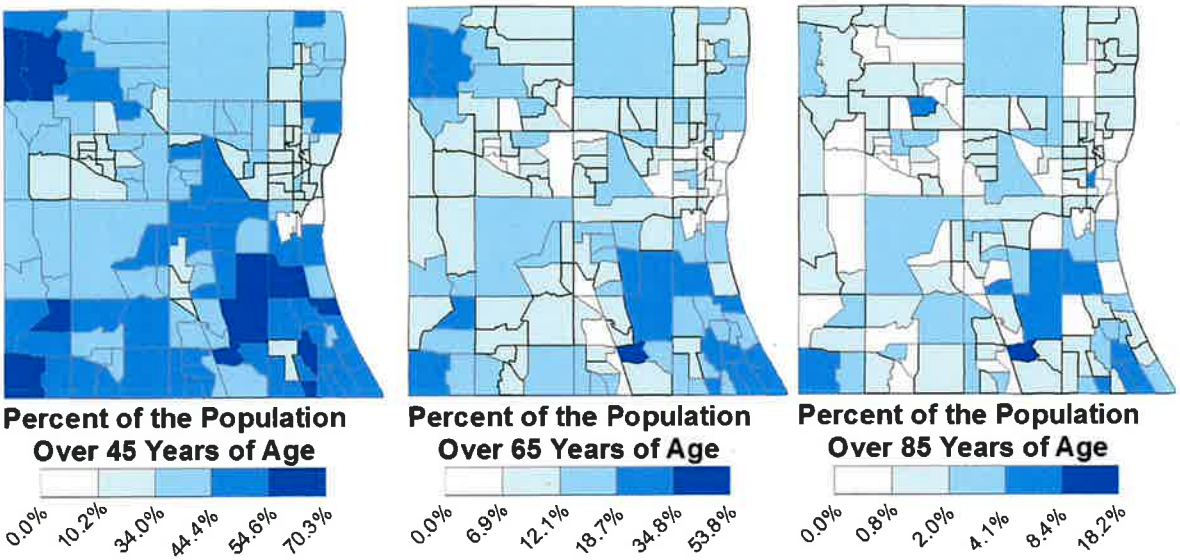
Childhood Age Distribution in Lake County by Census Tracts



[22] American Community Survey 5-Year Average 2010-2014

Conversely, the proportion of the population in older age groups have seen the largest increases and all groups over 45 years of age experiencing growth. 197,390 residents were between 45 and 64 years of age in 2014, representing 28% of the county's total population. The number of individuals over 65 in Lake County has increased by 24,410 people since 2000 and now totals 79,399 residents or 11.3% of Lake County's population.[23]

Adult Age Distribution in Lake County by Census Tracts



[23] American Community Survey 5-Year Average 2010-2014

SOCIOECONOMIC CHARACTERISTICS

Although Lake County is one of the wealthiest in the state by median household income ($77,873),[24] economic disparities in the County are dramatic. A metric of income inequality compares the ratio of income of the 80th percentile of households to the 20th. By this measure, Lake County is the most economically unequal of the collar counties. [25] Some of the wealthiest communities abut areas that are economically disadvantaged. Because economic factors can drive health outcomes, understanding today's economic landscape and changes over time are vital to understanding the current state of Lake County.

County	Income Inequality
McHenry	3.7
Will	3.7
DuPage	4.1
Kane	4.2
Lake	4.6

EMPLOYMENT[26]

Comparing the American Community Survey's 5-year Average rates from 2010 and 2014 for indicators like unemployment and poverty indicate growing hardship for many of the County's residents. Five-year averages were used to better understand chronic economic challenges in the community. Since the 2010 survey, the rate of unemployment in the county has declined, from 7.7% to 6.1%.[27]

POVERTY

Employment among working-age adults is improving; however, rates of poverty are not following the same trajectory and many of Lake County's residents are struggling. The rate of poverty in the county has risen from 7.0% in 2010 to 9.4% in 2014. This change translates to an additional 16,889 persons in poverty over four years and a total of 64,432 residents in poverty. This increase burdens some groups in Lake County more than others. Between 2010 and 2014, youth poverty (for individuals under 18) has increased from 9.6% of children to 13.3%.[28]

Poverty By Age	2010	2014
Under 18	9.6%	13.3%
18 to 64	6.0%	8.3%
65 and over	5.6%	6.0%

[24] American Community Survey 5-Year Average 2010-2014

[25] University of Wisconsin Population Health Institute. *County Health Rankings 2016.* Accessible at www.countyhealthrankings.org

[26] U.S. Census American Community Survey 5-Year Average, 2006-2010 and 2010-2014

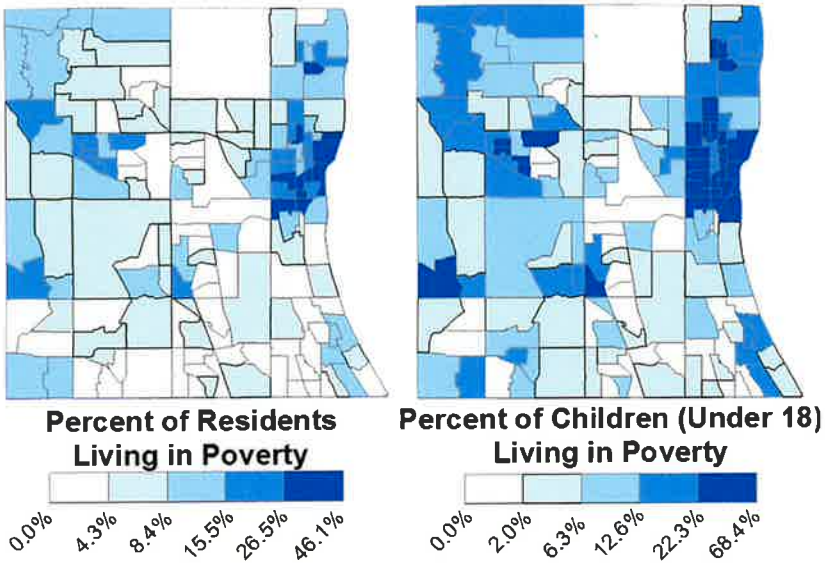
[27] American Community Survey 5-Year Average 2010-2014

[28] American Community Survey 5-Year Average 2010-2014

Poverty by Race and Ethnicity	2010	2014
Hispanic	13.8%	17.6%
Asian American	3.7%	5.5%
African American	18.9%	26.3%
White	5.4%	8.0%

Poverty among non-Hispanic whites has risen from 5.4% to 8.0%. For Hispanics, poverty has increased from 13.8% to 17.6%. Rates of Asian Americans in poverty has increased from 3.7% to 5.5%. African Americans face the highest levels of economic hardship. Poverty among African Americans in Lake County increased from 18.9% to 26.3%.[29] Increasing poverty rates represent an important burden to the health of residents. Poverty is one of the main *social determinants of health*, or social factors that can hinder an individual's ability to live a healthy life. Poverty is one of the great challenges in public health. Like many social conditions in Lake County, poverty is more concentrated in some areas than others and representing greater economic and health burden in specific communities.

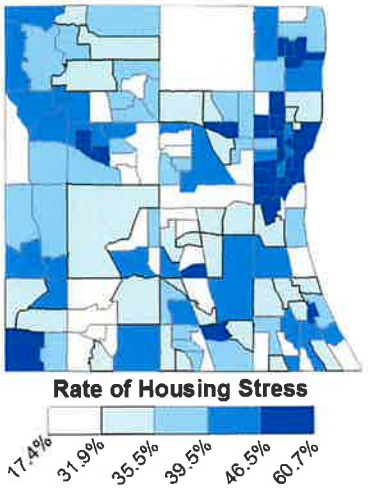
Poverty Distribution in Lake County by Census Tracts



[29] American Community Survey 5-Year Average 2010-2014

HOUSING

A healthy community needs safe, affordable housing. Unfortunately, many things create barriers to adequate housing. Incomplete kitchens, lack of plumbing facilities, overcrowding, and cost of rent can make it difficult to find quality housing. In Lake County, housing problems are primarily related to housing cost.



A household is "housing stressed" when more than 30% of household income is spent on housing costs. Economic housing stress affects 38% of households in Lake County, a slightly higher rate than either Illinois or the United States. Rates of housing stress are slightly higher than the state and nation for both homeowners with a mortgage and those without. Over half of all renters in Lake County face housing stress, placing an exceptional burden on communities where homeownership is less common.[30] Housing problems are considered severe in households paying 50% or more of their income on housing, units experiencing overcrowding (averaging more than 1.5 persons per room), or units lacking complete kitchen or plumbing facilities. The Comprehensive Housing Affordability Strategy data from the U.S. Department of Housing and Urban Development indicates that nearly one in five (18%) of households in Lake County fall into this more extreme category of housing stress.[31] By census tract, the burden of housing stress clearly impacts some communities more than others.

Household Type	Lake County	Illinois	United States
All Households with Housing stress	38%	36%	36%
Housing stress rates for Homeowners with a Mortgage	38%	36%	34%
Housing stress rates for Homeowners without a Mortgage	21%	17%	15%
Housing stress for Renters	51%	51%	52%
Severe Housing Problems	18%	19%	

[30] American Community Survey 5-Year Average 2010-2014

[31] University of Wisconsin Population Health Institute. *County Health Rankings 2016.* Accessible at www.countyhealthrankings.org

SINGLE-PARENT HOUSEHOLDS

Other social characteristics in Lake County include the structure of households within Lake County. About 37.8% of households in Lake County have children under 18 present; of these, about 5.7% have a single male householder and 16.7% have a single female householder. 21.4% of households with children have only one parent present.[32]

EDUCATION

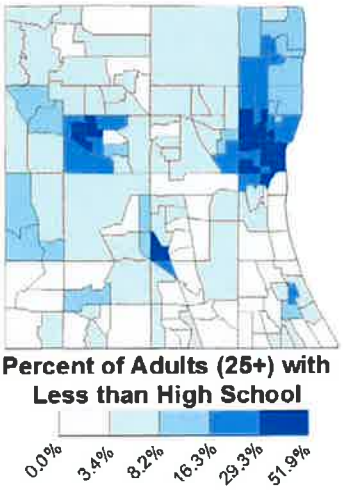
As a social determinant of health, education influences health outcomes in Lake County. Educational attainment can impact the jobs available to an individual, his or her earnings, and the level of literacy he or she can apply to health information. For Lake County, the educational influence on an individual's economic situation is summarized in the following chart, demonstrating the difference in median annual income for men and women with different levels of educational attainment. A high school degree, for example, is worth an additional $10,000 in annual income. Inequalities between men and women persist across all education levels but the trend for both genders remains that higher educational attainment results in higher income.[33] High levels of educational attainment are therefore important to ensuring prosperity among residents.

Level of Education and Median Earnings	All Residents	Men	Women
Less than high school	$20,992	$23,752	$17,720
High school or Equivalent	$30,768	$36,573	$23,928
Some college or associate's degree	$38,441	$46,001	$32,375
Bachelor's degree	$61,418	$80,159	$43,910
Graduate or professional degree	$87,618	$109,512	$65,766
Overall	$44,463	$54,749	$35,435

[32] American Community Survey 5-Year Average 2010-2014

[33] American Community Survey 5-Year Average 2010-2014

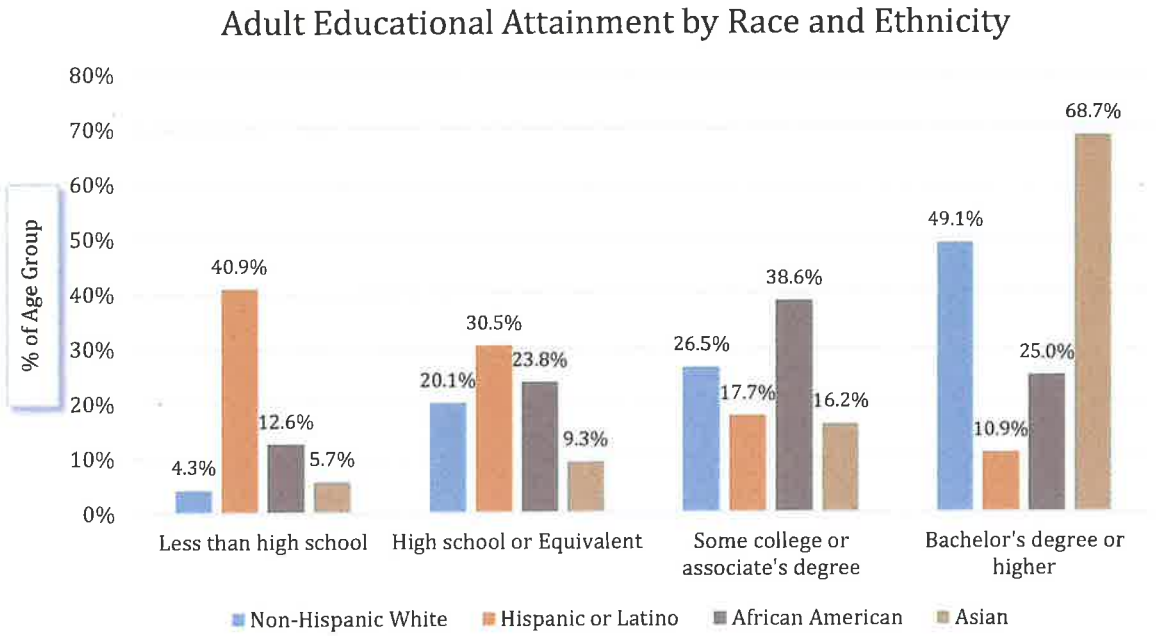
Educational levels vary geographically. Certain communities, frequently those facing other barriers to health and social services like language or poverty status, tend to have the lowest rates of high school completion. A map summarizes rates of adults over the age of 25 who do not have a high school diploma or equivalent credential.



Across Lake County 10.8% of adults age 25 and older have less than a high school level of education while 42.6% have a Bachelor's degree or higher. Disparities persist across racial and ethnic groups. Hispanic adults in Lake County having the lowest rates of high school completion (40.9%). Hispanic adults are nearly ten times more likely to have not graduated from high school than non-Hispanic whites (4.3%). African Americans in the county (12.6%) are three times more likely to have not graduated from high school as non-Hispanic Whites. Asians in the county are only slightly more likely to have not completed high school (5.6%). Major gaps persist in graduating from college, with non-Hispanic whites (49.1%) about twice as likely to have a bachelor's degree as African Americans (25.0%) and five times as likely as Hispanics (10.9%) in Lake County. Asian Americans in Lake County have the highest rates of college completion, with 68.7% of Asian American adults holding a bachelor's degree or higher.[34]

% of Adults

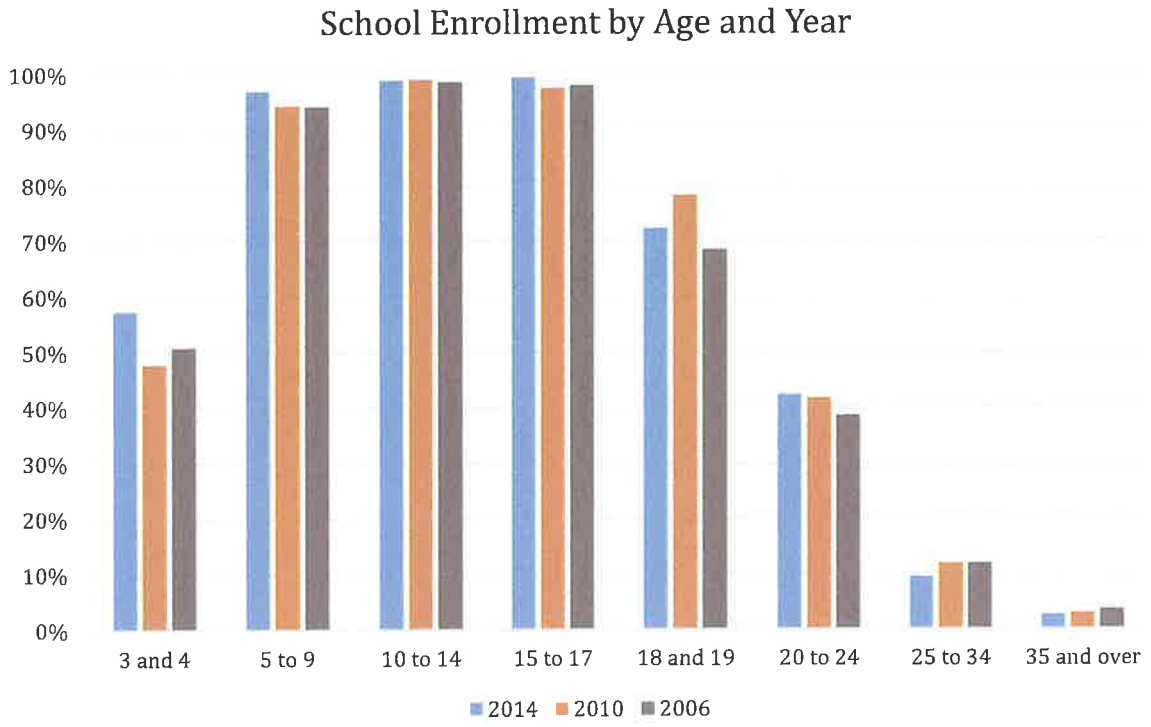
[34] American Community Survey 5-year Averages, 2010-2014



School Enrollment

Academic achievement relies on school enrollment. Increasing the rate of children who continue their education through high school and beyond can promote higher levels of educational attainment that, in turn, support better economic and health outcomes. School enrollment by age group has remained relatively stable between the 2006 and 2014 American Community Surveys. Nearly all children ages 5-17 are enrolled in school (roughly elementary through high school aged-children). Potential gaps in enrollment exist for children ages 3 and 4, where pre-kindergarten is an option that could potentially promote early learning and better prepare these individuals for kindergarten and beyond. About 57.4% of these early childhood learners are enrolled in school, an increase from 2010 (47.8%) and 2006 (50.8%). Educational enrollment drops for ages 18 and 19 as these individuals transition out of high school. Only 72.2% of these persons were enrolled in school in 2014.[35] Because of the considerable economic benefit of each additional level of education, efforts to keep these students engaged in school or training represents a potential opportunity to improve the health and wellbeing of residents of the county.

[35] American Community Survey 5-Year Averages, 2010-2014, 2006-2010, 2002-2006.



HEALTH RESOURCE AVAILABILITY

Healthcare resources are the tools that individuals can use to treat health problems. The ability to see a doctor when a medical intervention is needed is a basic requirement of being able to live a healthy life. Many factors will impact whether or not an individual will be able to access a doctor in a timely manner, including the total number of doctors available to see patients in an area, the insurance status of an individual, an individual's knowledge of what an insurance plan might cover, the cost of an appointment, and the ability to secure transportation to an office or hospital. These factors and more will influence how an individual utilizes the available healthcare system.

INSURANCE STATUS

One of the most important factors determining whether or not an individual will have access to the healthcare system is insurance status. Lack of insurance makes even minor medical issues difficult to treat. The rate of individuals with health insurance has increased, in large part due to the Affordable Care Act that requires individuals to carry some type of health insurance or face financial penalties. In 2014, 8.7% of residents lacked health insurance (about a 30% reduction from 2010). Coverage has improved across all groups, yet Hispanics and Latinos still have the highest rates of uninsured individuals at 23%, down from 2010's 31.1%. 10.4% of African Americans in Lake County do not have insurance, an improvement from 13.8% in 2010. Coverage among Asian Americans has improved from 12.3% uninsured in 2010 to

8.0%.[36] Insurance rates vary by age. 2.6% of children under 18 are uninsured while only 1.4% of seniors over 65 lack insurance. The proportion of adults age 18-64 have improved from 17.2% in 2010 to 12.7% in 2014. Nearly one in five (18.5%) of the individuals ages 19-25 are uninsured.[37]

Percent Uninsured by Race and Ethnicity	2010	2014
Hispanic or Latino	31.1%	23.0%
African American	13.8%	10.4%
Asian Americans	12.3%	8.0%
White, Non-Hispanic	6.4%	3.9%
All Lake County	12.4%	8.7%

Percent Uninsured by Age	2010	2014
Under 18	5.1%	2.6%
18 to 64	17.2%	12.7%
• **19 to 25**	--	18.5%
65 and Over	2.8%	1.4%

RATES OF PROVIDERS

In order to deliver services to all individuals who need primary, behavioral health, or dental services, communities need to have enough providers to support the population. Lake County has relatively high rates of residents to primary care physicians, with a ratio of 940 residents per primary care physician. Comparatively, the ratio across Illinois is 1,240:1. Lake County is among the top counties nationally and exceeds the 90th percentile mark for national values at 1,040:1. The population to provider ratio for dentists is also exceptional. In Lake County, the ratio of population to dentists is 940:1, while overall Illinois is 1,410:1. The 90th percentile in the United States is 1,340:1. For mental health providers (including psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, advanced practice nurses specializing in mental health care, and mental health providers that treat alcohol and other drug abuse), Lake County has 429 residents per provider, a better ratio than Illinois's 560:1. Unlike the other provider ratios, Lake County falls short of the national 90th percentile of 370:1.[38]

CARE UTILIZATION

While insurance status and rates of providers provide the scaffolding of healthcare, when and how residents use the system also plays an important role. By investigating usage, barriers, and general

[36] American Community Survey 2014 1-year Average & American Community Survey 2010 1-year average.

[37] American Community Survey 2014 1-year Average & American Community Survey 2010 1-year average.

[38] University of Wisconsin Population Health Institute. *County Health Rankings 2016.* Accessible at www.countyhealthrankings.org

healthcare habits, system strengths and limitations can be identified. To maintain good health, individuals should have their primary care physician evaluate them for an annual physical. Overall, 69% of adults had seen a doctor for a physical exam in the past year; however, rates vary by insurance status. Only 44% of individuals without health insurance had seen a doctor for a physical in the past year while 78% of individuals with health insurance had seen a doctor for a physical in the past year.[39] As a determinant of access to the healthcare system, health insurance status remains an important factor of health.

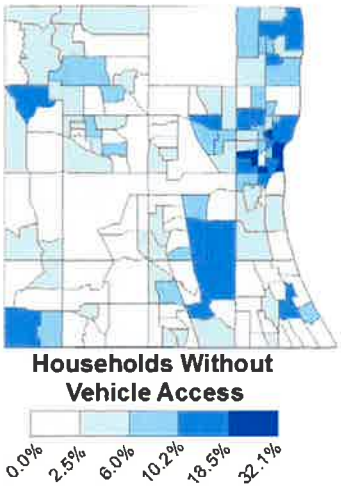
ORAL HEALTH

Oral health services are typically not covered by regular health insurance and dental insurance can be acquired separately. Because this type of insurance is not a requirement, coverage rates are lower. In Lake County, 74% of adults have some type of dental insurance coverage. 83% of Lake County adults had seen a dentist in the past year. 86% of adults with dental insurance had seen a dentist within the past twelve months, compared to 77% of adults without dental insurance. Residents were more likely to have seen a dentist in the past year than a primary care physician.[40]

[39] Lake County Community Health Survey 2015
[40] LCHD 2015 Community Health Status Survey

BARRIERS TO CARE

Individuals can face many barriers to accessing the care they need. Cost can make it difficult for residents to see a doctor. In the past year, 10% of Lake County adults did not seek medical attention they needed because of the cost. Individuals without health insurance were more than twice as likely to report cost as a barrier to care in the past year (25%) than those individuals with health insurance (9%).[41]



Transportation resources can also be a barrier to accessing medical services. Because Lake is a suburban county, transportation oftentimes requires a personal vehicle. A doctor's office might be far away or located in a section of the county that does not have adequate public transportation services. In the past year, 4% of residents reported that transportation kept them from seeing a doctor when they needed one.[42] Of the 241,846 households in the county, 12,000 had no vehicle available (about 5% of households).[43] Household access to a vehicle varies across the county. The transportation barrier might be described by the map of households without access to a vehicle. 89% of residents can identify a regular doctor for their care. Having a regular doctor indicates that an individual is engaged in the healthcare system and their own health.[44]

HEALTH LITERACY

Basic knowledge of an individual's health insurance plan can help him or her to navigate a complicated health system and ensure that his or her individual needs are met. After the promulgation of the Affordable Care Act, almost all health insurance plans should cover mental health, substance abuse, and preventive services at no cost if the services are received within network. Of adults with health insurance in Lake County, 72% believed that their plans covered mental health services. 54% believed that their insurance plan covered substance abuse services. 67% believed that their health insurance covered prevention services.[45]

Appropriate use of medical services leads to better, less costly health outcomes. When managed correctly, chronic conditions should rarely result in hospitalizations. Assessing preventable hospital stays can indicate how well these conditions are being managed. One of the available metrics is an annual rate of preventable hospital stays per 1,000 Medicare enrollees. Lake County averages 50 preventable stays per 1,000 enrollees, better than the Illinois rate of 59 per 1,000 but not as well as 38 per 1,000 of the 90th percentile of counties in the United States.[46]

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[41] LCHD 2015 Community Health Status Survey
[42] LCHD 2015 Community Health Status Survey
[43] American Community Survey 5-Year Average (2010-2014)
[44] LCHD 2015 Community Health Status Survey
[45] LCHD 2015 Community Health Status Survey
[46] County Health Rankings 2016

SUMMARY RESULTS

The Community Health Status Assessment reviewed a variety of data sources to quantitatively describe health and wellbeing of people in Lake County. The 703,170 residents are more racially, ethnically, and linguistically diverse than ever before.[129] 35.8% of the county are people of color and 28.0% of people over the age of five speak a language other than English at home.[130] Lake County is aging. The median age in the county increased from 33.8 in 2000 to 37.2 in 2014.[131] Lake County remains one of the wealthiest counties in the State of Illinois with a median household income of $77,837, yet 9.4% of residents and 13.3% of children are in poverty.[132] Minority groups have higher rates of poverty than non-Hispanic whites in the county. Housing stress impacts 38% of all households in Lake County and 51% of households that rent. Educational attainment in the county is generally high and 89.2% of adults over the age of 25 have a high school degree or higher, yet only 40.9% of Hispanic adults have completed high school. Health insurance coverage is generally high. 91.3% of residents have some sort of health insurance coverage, yet lack of insurance still burdens 23% of Hispanics and Latinos and 10.4% of African Americans in Lake County. Residents generally report good health at rates nearly equivalent to the 90th percentile of counties across the United States.[133] 14.4% of adults in Lake County are smokers.[134] 49% of adults in Lake County eat two or fewer fruits or vegetables per day.[135] 23% of adults in Lake County have been diagnosed with some type of mental illness.[136] Generally, Lake County enjoys relatively low rates of adverse pregnancy outcomes, yet African Americans in Lake County experience these outcomes at higher rates.[137] Chronic diseases afflict many of the adults in Lake County (22.5% of adults are obese,[138] 6% have been diagnosed with diabetes, and 35% have been told they have hypertension[139]) and chronic diseases comprise four of the top five causes of death.[140] Opioids represent an emerging health issue beyond the overdose death rate.

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[129] American Community Survey 5-Year Average 2010-2014

[130] Ibid.

[131] Ibid.

[132] Ibid.

[133] University of Wisconsin Population Health Institute. County Health Rankings 2016. Accessible at www.countyhealthrankings.org

[134] Illinois Behavioral Risk Factors Surveillance System Round 5

[135] LCHD 2015 Community Health Status Survey

[136] Ibid.

[137] Illinois Department of Public Health Vital Statistics

[138] LCHD Obesity Report 2015

[139] LCHD 2015 Community Health Status Survey

[140] CDC WONDER 2010-2014

Closing

The four assessments created the base of knowledge that Live Well Lake County used to plan the next five years of improving community health. Public health system representatives, community leaders, community members, and LCHD/CHC all contributed their knowledge, values, and expertise to determine the current state of health in Lake County and the challenges, opportunities, and goals for the future. The Local Public Health System Assessment gathered representatives of the entire public health system. These individuals were tasked with assessing how well each of the ten essential public health services are currently being delivered in Lake County and identify actions to improve how well the public health system functions. The Forces of Change Assessment gathered community leaders to identify trends and emerging issues for the local public health system and plan for ways that the system can proactively prepare for the future. The Community Themes and Strengths Assessment actively engaged the community at large and solicited opinions and priorities from the people served by the Lake County public health system. Lake County residents identified poor diet and inactivity and chronic diseases (including obesity, diabetes, and hypertension) as the two most important areas for improvement. Mental health needs arose frequently in focus groups that engaged historically underrepresented populations. The Community Health Status Assessment (CHSA) confirmed the importance of chronic diseases like obesity, diabetes, and hypertension (affecting 22.5%, 6%, and 35% of adults in Lake County, respectively) as well as mental health issues (affecting 23% of adults in Lake County). The CHSA also identified communities facing greater burdens of health conditions like obesity. In the 60064 ZIP code, 35.7% of adults are obese, while in the 60045 ZIP code, only 11.7% of adults are obese. Disparities in conditions that affect health, social determinants like poverty and educational attainment, are evident between census tracts and identify the greatest areas of need in Lake County. Taken together, these four assessments informed the prioritization process that lead to the four community priorities for the Lake County Community Health Improvement Plan of 2016-2021: hypertension and cardiovascular disease, obesity, behavioral health, and diabetes.

Appendix

APPENDIX A: LOCAL PUBLIC HEALTH SYSTEMS ASSESSMENT PARTICIPANTS

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